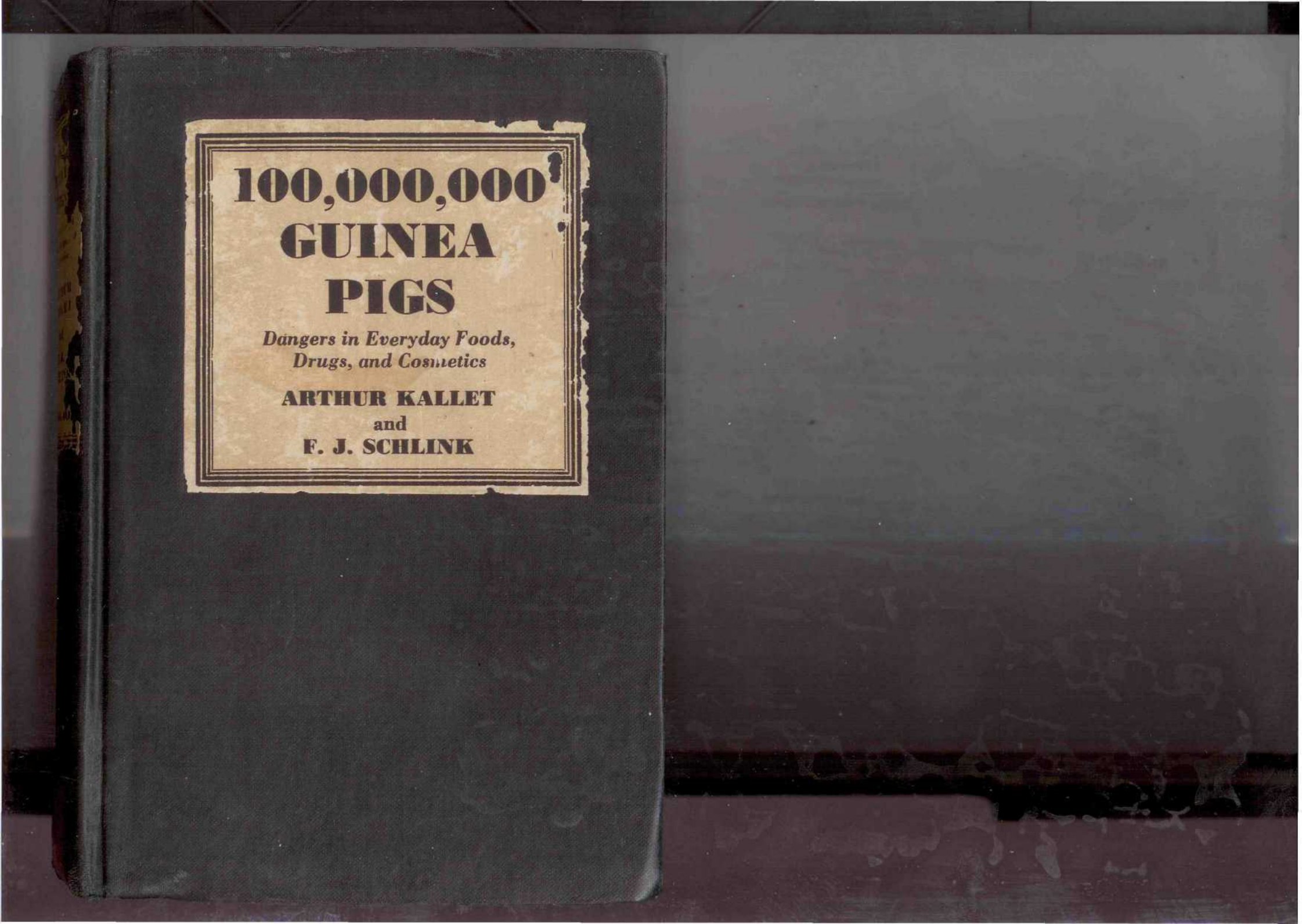
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GUINEA
PIGS
Dangers in Everyday Foods,
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ARTHUR KALLET
and
F. J. SCHLINK

100,000,000 GUINEA PIGS

DANGERS IN EVERYDAY FOODS, DRUGS, AND COSMETICS

BY

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AND

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Co-Author, with Stuart Chase,
of "Your Money's Worth"

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tion with the study of current newspaper, magazine, and radio advertising.

For the facilities afforded by Consumers' Research through its extensive files of information, we are indebted for the privilege of using a very large part of the material in this book. This material, covering the operation of the government services in respect to food and drug control and the specific risks consumers run because of the failure of this control, has been assembled by Consumers' Research through its long continued study of the complex technical literature on consumers' goods, and through contacts with professional and scientific experts among its subscribers and consultants.

FOREWORD

THIS BOOK is intended not only to report dangerous and largely unsuspected conditions affecting the health and safety of all consumers of foods, drugs, and cosmetics, but also, so far as possible, to give the consumer some measure of defense against such conditions. To this end, the authors have stated their case in terms of brand or trade names wherever possible, irrespective of the size or prominence of the manufacturer of the food, drug, cosmetic, or other product involved, or of the popularity of the product.

The facts presented have been checked with great care; if errors have been made, as is probably inevitable, considering the enormous mass and extremely wide range of the material that had to be reviewed and related, the authors are confident these will concern only details, and that the truth or validity of no major point treated will be involved. Since the cases included in this book are based on a study of many thousands of documents, both published and unpublished, it has been possible to indicate only relatively few of the principal published sources. A more complete list of published sources has, however, been prepared for reference, and copies may be obtained from the publisher.

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ous defects of this book, and plead in extenuation the difficulties encountered in working in a field where those in the Government services and in industry, who have vital information, guard it carefully from outsiders. This study could have been carried out far more effectively by those on the inside—by food and drug commissioners who have watched self-serving business men and politicians in the act of breaking down the regulatory system. These men know the whole sad story—but no one of them has yet cared or dared to tell it. Until one of these better qualified men steps forward, our efforts must, we fear, suffice.

Arthur Kallet is an engineer, and one of the directors of Consumers' Research, Inc. F. J. Schlink, technical director of the same organization, is an engineer and physicist, and was for six years on the staff of the U. S. Bureau of Standards. He is co-author, with Stuart Chase, of "Your Money's Worth."

CONTENTS

I

THE GREAT AMERICAN GUINEA PIG

IN THE magazines, in the newspapers, over the radio, a terrific verbal barrage has been laid down on a hundred million Americans, first, to set in motion a host of fears about their health, their stomachs, their bowels, their teeth, their throats, their looks; second, to persuade them that only by eating, drinking, gargling, brushing, or smearing with Smith's Whole Vitamin Breakfast Food, Jones' Yeast Cubes, Blue Giant Apples, Prussian Salts, Listroboris Mouthwash, Grandpa's Wonder Toothpaste, and a thousand and one other foods, drinks, gargles and pastes, can they either postpone the onset of disease, of social ostracism, of business failure, or recover from ailments, physical or social, already contracted.

If these foods and medicines were—to most of the people who use them—merely worthless; if there were no other charge to be made than that the manufacturers', sales managers', and advertising agents' claims for them were false, this book would not have been written. But many of them, including some of the most widely advertised and sold, are not only worthless, but are actually dangerous. That *All-Bran* you eat every morning—do you know that it

may cause serious and perhaps irreparable intestinal trouble? That big, juicy apple you have at lunch—do you know that indifferent Government officials let it come to your table coated with arsenic, one of the deadliest of poisons? The *Pebeco* Toothpaste with which you brush your teeth twice every day—do you know that a tube of it contains enough poison, if eaten, to kill three people; that, in fact, a German army officer committed suicide by eating a tubeful of this particular tooth paste? The *Bromo-Seltzer* that you take for headaches—do you know that it contains a poisonous drug which has been responsible for many deaths and, the American Medical Association says, at least one case of sexual impotence?

Using the feeble and ineffective pure food and drug laws as a smoke-screen, the food and drug industries have been systematically bombarding us with falsehoods about the purity, healthfulness, and safety of their products, while they have been making profits by experimenting on us with poisons, irritants, harmful chemical preservatives, and dangerous drugs.

Just how we consumers are being forced into the rôle of laboratory guinea pigs through huge loopholes in obviously weak and ineffective laws is described at length in the chapters that follow. A brief glance at a few cases that show our present helplessness will suffice here.

William J. A. Bailey, an ex-auto-swindler, thought he could make money by dissolving radium salts in water and selling this water to rich men to

cure their ills. Bailey's radium water has sent at least two men to horrible deaths, and a similar fate may be awaiting scores or hundreds of others who drank this deadly fluid.

Kora M. Lublin read or heard that thallium acetate had once been used by physicians in an ointment to remove hair in certain disease conditions. She did not bother to learn or did not care that this method of hair removal had been abandoned by physicians after several patients died; she marketed a depilatory cream containing a large percentage of thallium acetate. The medical journals have reported case after case of dreadful illness and suffering by women who used the cream, and the company exploiting it has gone bankrupt with $2,500,000 in damage suits as liabilities, and $5 assets; yet the cream continued to be sold.

A manufacturer seeking a cheap adulterant for Jamaica ginger came upon tri-ortho-cresyl phosphate. Jamaica ginger extract containing this chemical, sold in drug stores in many states, has caused terrible deformity and paralysis in from fifteen to twenty thousand victims, many of whom have died.

What, you may ask, has happened to these men and women who have killed and maimed? Nothing. William J. A. Bailey is now engaged in other ventures similar to his deadly radium water. Persons in the company that sold the thallium acetate depilatory are now manufacturing and selling another depilatory called *Croxon*. Nobody knows who sup-

plied the chemical that was used to make Jamaica ginger into a deadly poison for which there is no known antidote, and nothing could be done to him if he were known.

These people violated no law. They were all carrying on "legitimate business", and the law gives them the right to experiment on the public whatever the consequences to the human beings involved. In the eyes of the law we are all guinea pigs, and any scoundrel who takes it into his head to enter the drug or food business can experiment on us. He may be uneducated, even feeble-minded. If he decides to become a manufacturer, it is his privilege to take down a dozen bottles from a shelf, mix their contents together, advertise the mixture as a remedy for indigestion, or asthma, or coughs, and persuade us to buy it. The mixture may contain strychnine, arsenic, carbolic acid, and other deadly poisons. But—in most States—he will have violated no law, indeed will not have offended the ethical sense of the average judge or legislator. (This statement is made advisedly, after a careful study of many cases in the courts and before legislative hearings.) When the experiment has failed and several of us have died, damage suits may make the business unprofitable and so for the time being end it. But its owner may again take down the same dozen bottles and start over with a new name.

The Federal Food and Drugs Act prohibits false labeling of drugs shipped across State lines; but if no claims are made *on the label*, if the ingredients are not stated *on the label*, the Act does not apply. The Act does prohibit the addition of poisonous substances to foods. Yet even with foods the public must be the guinea pig, since the manufacturer is not required to *prove* that the substances he adds are safe for human consumption; his customers by dying or by becoming ill in large numbers—and in such a way that the illness can be directly traced to the foodstuff involved and to no other cause—must first prove that it is harmful before any action will be considered under the Food and Drugs Act. If prohibition of the poison will not interfere with the business of any large and influential interest, the Government may then take action.

If the poison is such that it acts slowly and insidiously, perhaps over a long period of years (and several such will be considered in later chapters), then we poor consumers must be test animals all our lives; and when, in the end, the experiment kills us a year or ten years sooner than otherwise we would have died, no conclusions can be drawn and a hundred million others are available for further tests.

To manufacturers and regulatory officials, the question—in the surprisingly few cases when it occurs to them to question—is whether the particular adulterant or preservative they are at the moment considering is, of itself, poisonous. A negative answer

brings joy to the manufacturers, but not to the consumer. His question, on the other hand, is this: Will all of the adulterants, alkali and acid preservatives, legally permitted residues of insecticides, and other poisons acting concurrently for the rest of my life cause me to suffer more often and more seriously from illness, and bring about disability or death one year or ten years sooner?

A dozen eminent authorities help answer the consumer's question. Typical of the answers is that given by one of the most capable of these authorities, Dr. Edwin Oakes Jordan, chairman of the Department of Hygiene and Bacteriology of the University of Chicago. Dr. Jordan deplores the lack of knowledge concerning the action of various chemical substances in food. But—he says—

"until such information is forthcoming we do well to err on the side of caution. The desirability of adopting this attitude is especially borne in upon us by the apparent increase in recent years in certain diseases of the alimentary tract. For aught we know to the contrary, the relatively high death-rates from degenerative changes in the kidneys, blood vessels, stomach, and other organs may be in part caused by the use of irritating chemical substances in food. Although no one chemical by itself, and in the quantities in which it is commonly present in food, can perhaps be reasonably accused of producing serious and permanent injury, yet, when to its effect is superadded the effect of still other poisonous ingredients in spiced, smoked, and preserved foods of all kinds, the

total burden laid upon the excretory and other organs may be distinctly too great."

Dr. Jordan speaks only of chemical preservatives. Add to these the variety of poisons other than preservatives ingested with foods and common drugs, and the hazard assumes still greater proportions. The possibility of an exceedingly large number of resulting fatalities suggests itself when, for example, we read the report of the Metropolitan Life Insurance Company that the death-rate from cancer has surged upward at an alarming rate since 1930. No cause could be found for an increase in the cancer death-rate of over seven percent in 1931, and an additional nine and one-half percent in the first half of 1932. "We are confronted with some influence that is increasing the true incidence of cancer," said the statisticians. Common sense would at least demand that we inquire whether or not that influence might be found in our food and drug supplies—in our fruits and vegetables contaminated with arsenic insecticide, for example. It has been known for 40 years that small quantities of arsenic, continued for a long period, may give rise to growths of a cancerous nature. (Rosenau: "Preventive Medicine and Hygiene". 1927.)

It will be helpful, in understanding how absurdly small are the amounts spent by the nation and the

States on food and drug control, to make a rough estimate of the losses caused by the wholesale poisoning of the public. When industrial statisticians wish to evaluate the seriousness of an accident hazard, or of the industrial losses resulting from illness, they figure the total number of work days lost, and the amount this represents in wages. Let us try to make a similar approximation for the poison hazard to the American population.

It is exceedingly likely that the poisons legally and systematically fed to the American public will, by disturbing the bodily functions, overtaxing the kidneys and other organs, and upsetting the digestive processes, bring the onset of old age and functional weakness and infirmity earlier than it would otherwise have come; and in individual cases, by lowering the normal resistance, opening the way to such diseases as pneumonia, tuberculosis, arthritis, or colitis, will subtract several decades from a person's normal expectancy of life.

Such shortening of the average life can conservatively be estimated at from three to ten years. Our statistical score of time lost does not, however, end here. A large part of all disabling and partially disabling illness, such as headaches, obscure pains, indigestion, constipation, "nerves", general weariness, "laziness", and lethargy, arise from no known causes. They come, and we accept them as unavoidable. They may not incapacitate us completely, but they do decrease producing power, general health and vigor,

and, even more, the joy of living. It is certain that many of these obscure types of illness are due to poisons in food and in drugs. In addition to these slight and passing ailments, much serious disease invited by lowered resistance must also be added to the score. A very conservative estimate of the average time lost from productive activities through both slight and serious illness and untimely death might be put at five years, or, for the total population, 625,000,000 years: a tremendous tribute of human life to the carelessness or avarice of the producers and to the indifference of legislatures and courts—the equivalent of the total life span of over ten million persons.

Is our crude, approximate figure too high? Divide it by two, or by ten. It still is intolerably high. Divided by ten, it is equivalent to the needless sacrifice of thousands upon thousands of lives each year.

Let us give each year of life the low cash value of $500, appropriate to the times in which we find ourselves. On this basis we estimate that the economic waste attributable to the slow poisoning of the public is over 300 billion dollars. This is equivalent to nearly 5 billion dollars annually, or, if you prefer to divide this by 10, 500 million dollars. As against this figure, we have a figure of approximately one million dollars, or one cent per capita per annum, spent by the United States Government for the enforcement of its feeble and obsolete Food and Drugs Act.

The States and some municipalities also have regulations for the control of food and drugs. Some aspects of local control activities are mentioned briefly in later chapters. It is sufficient to say here that the control of food and drugs in most States and municipalities falls but little short of being completely lifeless and ineffective. A left-handed sort of control over some advertising of dangerous medicinal products is exercised by the Federal Trade Commission, which may stop advertising that is considered unfair to the advertiser's competitors. Thus, if a product is advertised as safe and is not safe, the Commission may consider this unfair to the makers of relatively safe products. It seems needless to say that this is not the type of protection on which the consumer can rely. The Fraud Order division of the Post Office has an effective weapon against the most obviously dangerous medicinal products sold by mail order—when, in due course, someone takes the trouble to bring the fraud to the attention of the postal authorities. Against the less obvious frauds, it doesn't even come near to working. The total of the expenditures of the various governmental divisions for the protection of the consumer, directly and indirectly, certainly does not amount to more than four or five cents per year per person. The inadequacy of enforcement with these few pennies pitted against commercial and political dollars has been neatly summarized by the National Civil Service Reform League, of which George W. Wickersham

is a vice-president, following an investigation of food inspection—a vital link in food control.

Says the League's report (1925, but known to apply more fully in 1932):

"The trusting confidence of the American public in the efficiency of laws was never more clearly shown nor more grossly betrayed than in the matter of food inspection. We have enacted 'pure food' laws and ordinances, therefore, presumably we have 'pure food.' But between the law and the 'pure food' lies a most important factor —the human element charged with the interpretation and the administration of these laws and ordinances. This element—given great powers of discretion; power to make 'rules and regulations' to an extent practically nullifying the intent of the law; subject to overwhelming commercial and political pressure—is the weak link in the chain, and *practically the end of the effect of the law.*

"The consumer in his effort to conserve his health selects his food with 'nutriment,' 'calories' and 'vitamins' in mind, happily unaware that a considerable part of the food he buys, though well cooked and daintily served, may be in a condition of expertly disguised but *dangerous state of disease, decay or adulteration.* He has relied on the law to protect his food from its initial stage through the processes of gathering, slaughtering, handling, packing, etc., all by men definitely dealing in food for the money to be made out of it.

"Avarice and the pressure of competition are weighed in the balance with the evil of selling diseased, spoiled, verminous and adulterated food disguised as and sometimes labeled wholesome, with the result almost invariably

in favor of the former. The dealer or producer 'cannot afford' to lose the profit on diseased, decayed, or adulterated foods unless he is compelled to do so.

"Who or what is going to compel him? Certainly not the mere existence of the law. . . .

"*Actual regulatory inspection by the Federal Government seems to be almost negligible except in the case of meat.* . . .

". . . The United States Department of Agriculture is permitted to make and enforce regulations which to a considerable extent nullify the intent of the Meat Inspection Act, presuming that it was to eliminate diseased meat." (Italics ours.)

There can be no doubt that the legal forms of consumer protection have failed. Can we look for aid outside the law—in the integrity of the manufacturer, in the watchfulness of the scientist, in the scrupulousness of publications carrying food and drug advertising?

All of the propaganda agencies of business have skilfully conditioned the public to believe that the only safeguard needed is the integrity of the manufacturer. There are rare cases where the public welfare is a major concern in small businesses owned and controlled by a few persons. The better manufacturers of jams, jellies, and preserves come very near to forming a trade operating in a way to produce pure and wholesome products prepared under sanitary conditions and honestly labeled and marketed. But, on the whole, this first link in the chain of consumer protection is the weakest. In case

after case, the manufacturers have demonstrated that their chief and most consistent interest is in profits; and we speak here not only of the small herb compounder and cancer quack, but also of the largest and most reputable drug and food houses. Read, for example, in a later chapter, how dozens of shipments of anesthetic ether put out by great drug manufacturers have been so bad as to be destroyed by the Government; how the important firm of Hynson, Westcott & Dunning persuades the public to buy its dangerously ineffective antiseptic; how the fruit packers send out apples coated with more lead and arsenic than even the tolerant Government officials permit. Case after case demonstrates only too well that the average manufacturer will resist to the end any interference with his business, any attempt to deprive him of his vested interest, even when it has been proved beyond doubt that his product is a menace to health and life.

This does not prove, however, that food and drug manufacturers are exceptional, or that their members have been drawn from a peculiarly ruthless class. On the contrary, it means only that they are the norm in a society which has sanctified the fastest acquisition of the greatest number of dollars as the standard for high achievement of the individual; in a society where misrepresentation and exploitation are the unfailing handmaidens of success, in all business which deals with the ultimate consumer in the mass.

Nevertheless, the passage of the Food and Drugs Act twenty-five years ago and the passage of similar acts in nearly all States at about the same time were evidence that the public demands protection from poisoning even though the pattern of behavior resulting in the poisoning is normal in our business civilization. Drinking gin and speeding in a powerful automobile are normal, too; but if a drunken driver kills a child while racing down Main Street at sixty miles an hour, we feel justified in bringing him to bar as a criminal and imprisoning him for a month or two.

The food and drug manufacturers also kill. Perhaps we should name a new crime for them and call it statistical homicide. But whatever we call it, they are responsible for the death of very large numbers of persons—death through premature old age, disease of stomach, bowels, and kidneys, which weakened organs cannot resist, and death because good medicine or medical care was needed, and a patent medicine for pneumonia or tuberculosis or cancer was taken instead.

Nothing illustrates the irresponsibility and indifference of many manufacturers better than the following quotation from the August, 1932, issue of *Food Industries:*

". . . Not more than a year ago there appeared in one of the current magazines the advertisement of a food manufacturer, depicting a chemist seated at a desk peering very intently through a microscope. Nicely arranged

in front of him on the desk were bottles and cans representing the product of this manufacturer. The descriptive matter accompanying the picture was cleverly worded in a manner to give the reader the impression that every product of this manufacturer was produced under the closest supervision of a food chemist. . . . The 'Chemist' was none other than the production manager, and the microscope had been borrowed from a local hospital. . . .

". . . The 'questionable' manufacturer . . . will violate without compunction any regulation which interferes in the least with the carrying out of his own policies. . . . Against the advice of the chemist, the manufacturer may use raw materials of an inferior grade, from which it is impossible to produce goods which comply with Federal Food Law regulations. . . . Even after a warning from the chemist that the products are below standard, the manufacturer in some cases deliberately orders the products shipped out, with the hope that they will 'get by'."

Other links in the chain of non-legal consumer protection are nearly as weak. Can we, for example, safely put our trust in the scientists who vouch for the safety or quality of a product? The associate dean of the College of Pharmacy of Columbia University vouched for the harmlessness of the deadly thallium acetate depilatory. Can we trust the publications which carry advertising for food and drug products to reject advertising of dubious or harmful products? As we shall show in a later chapter, here also there is absolutely no safeguard.

In the following pages, the authors will point out by name kinds and brands of foods, drugs, and cosmetics which present specific hazards to the consumer, and in the final chapters will propose remedial measures. In a single volume it is possible to report only some of the more important cases of which we have record. To cover the whole field in a reasonably comprehensive way would require several millions of dollars for research—which consumers have naïvely supposed that the Government was expending in their behalf—and a hundred volumes such as this one. This book is written in the interest of the consumer, who does not yet realize that he is being used as a guinea pig, and who can protect himself from the risk he runs in this rôle only through a knowledge of the methods used in this curious, one-sided experiment with bleaches, preservatives, adulterants, fillers and poisons—and with men, women, and children as test animals in place of rats and guinea pigs.

II

THE GROCER, THE BUTCHER, THE BAKER

"PURE FOOD MARKET. Good morning!"

"This is Mrs. Jones talking. Will you take an order, please? I want a box of Kellogg's *All-Bran*, a can of *Crisco*, two pounds of dried apricots, a loaf of white bread, a bottle of cider, a large can of salmon, and a quart of milk; and will you have your meat department send me a six-pound ham and two pounds of nice, fresh, chopped-meat."

Some time during the morning the order will be delivered to Mrs. Jones' kitchen. And to a million other American kitchens at the same hour will come the same common, everyday foods, most of them important items in the diet of the Joneses, the Smiths, and the Browns. And because of them, out of the pockets of America's Joneses and Smiths and Browns will come, during the next year, a hundred million dollars or so for medicines and doctor bills and time lost from work; a few hundred thousand members of the Jones families will suffer from obscure stomach, intestinal and kidney ailments; a hundred thousand Grandfather Smiths will die from five to ten years sooner than they would otherwise have died; and

some thousands of Browns will succumb to tuberculosis contracted in the first place from contaminated food.

Let us take the cartons, bottles, cans, and bags out of the delivery boy's box, one by one, and examine the contents of each carefully. We shall find a choice lot of irritants, injurious chemical preservatives, and dangerous chemical and bacterial products of decomposition.

Mrs. Jones often orders Kellogg's *All-Bran*, because she has read and heard several hundred advertisements advising her to feed her family plenty of roughage in order to save them from constipation, bad complexion, tired, run-down condition, and so on. And the advertisements have told her that the ideal source of roughage is bran, pure, wholesome, delicious; serve it to the whole family at breakfast every day.

There is a degree of truth in the advertisements; bran is helpful in *some* cases of constipation. But the roughage in that box of Kellogg's which Mrs. Jones is going to feed to her family is a powerful intestinal irritant to many persons; its continued use may be harmful to most persons; to some it will be dangerous. Different persons in the same family may react differently to it. Thus, Jimmie Jones will eat it every day without apparent injury, while his sister Mary will develop a lasting bowel trouble.

Bran is one of the roughest of roughages, and what roughage does to sensitive intestines has been

vividly described by Dr. Walter C. Alvarez of the Mayo Clinic, Rochester, Minnesota. The *New York Times* of April 8, 1932, quotes Dr. Alvarez as saying that much of the indigestion and many other stomach troubles now prevalent are due to too much roughage. "The fad for what he calls rabbit food—spinach, greens, salads, raw fruit, celery, rutabaga, and bran foods—has been overdone, he says, and he figures that the craze for roughage is worth $300 a month to any good stomach specialist. 'The roughage diet is all right,' he says, 'for people who have the digestion of an ostrich. But it often causes sensitive people a lot of trouble.' "

And Dr. Alvarez's is no lone voice crying out against the feeding of rabbit food to humans. Most doctors who can see past their piles of pill-boxes, and who are not misled by the propaganda of the food manufacturers in magazines with advertising axes to grind, agree with him. Four hundred and seventy doctors recently answered a questionnaire sent out by the Minnesota State Medical Association, in which one of the subjects was roughage. "It was surprising to find so many of these men expressing themselves so strongly against the use of bran," says Dr. Alvarez in a summary of the answers to the questionnaire which he wrote for *Minnesota Medicine;* "but then I remembered that it is not the medical profession that has been leading the crusade for more . . . roughage; this fight has been waged largely by lay women, amateur dietitians, self-

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appointed guardians of the public health, and cranks of all kinds."

Dr. Alvarez admits that a questionnaire does not assure a representative expression of opinion, but he points out that the signatures on the replies in this case include the names of scores of the ablest medical teachers and practitioners in America. He continues:

"A number of the physicians who answered made note of the fact that they formerly prescribed bran, but later turned strongly against it. Forty per cent said that they never prescribe it, and 34 per cent prescribe it only occasionally. . . .

"I was interested to see that so many physicians have found that the addition of bran and roughage to the diet will relieve only a small percentage of the patients with constipation. Many of the doctors commented also on the fact that bran may relieve for a time and then fail to have any effect; the bowel seems to become accustomed to the extra stimulus. . . .

"A number of physicians recorded the observation that many persons who for a time tolerate the use of bran later get into trouble and suffer with indigestion.

"I was surprised at the number of physicians who expressed themselves as being strongly opposed to the use of bran. For instance, the president of the American Medical Association—an experienced gastro-enterologist—writes: 'For ten years I have not permitted the use of bran in any family under my direction.' . . .

"Most of the physicians felt that the propaganda for the wide use of roughage has been definitely detrimental to the public health and comfort."

Another report tells what the effects of a roughage diet can be in extreme cases. A patient who was doing fairly well was instructed by a physician to take bran. Shortly afterward an acute obstruction occurred making it necessary for the surgeon to cut out a section of intestine.

Few cases are so serious; yet there is little doubt that on the whole a vast amount of injury is being done to the American public by the bran food manufacturers and their domestic-science and diet-fad supporters. Digestive disturbances due to excessive roughage may cause only temporary discomfort to healthy persons; but many eat rough foods because they are already suffering from constipation or digestive ailments, and have accepted the advertisers' road to salvation. If in some cases the road happens to be the right one, it is just pure luck; there is more than a chance that roughage so enticingly pictured in the advertisements will aggravate whatever is wrong rather than cure it. In fact, the constant irritation that results from the daily use of bran by some who are very sensitive may lead to intestinal cancer. Although the evidence of this is not conclusive, must we all be guinea pigs for the Kellogg Company, or the Post Company, or any other breakfast food manufacturer in such a dangerous experiment? Without doubt, the Kellogg Company believes

its duty done when in an occasional advertisement it advises the reader to consult a physician if the constipation is abnormal. But to the long-suffering public, constipation is constipation, just as a fish is fish, whether it is minnow or shark, and nothing is considered abnormal until it reaches the stage where the physician just must be consulted. And, alas! too often the physician reads the advertising everywhere spread about him, more often than he reads medical reports; he may even prescribe bran in cases where the absolute elimination from the diet of all roughage, including even raw fruits and vegetables, is clearly indicated.

When Mrs. Jones ordered *Crisco* over the telephone, she probably saw in her mind's eye pictures of tempting dishes with which the Mrs. Joneses are advised by advertising writers to keep the Mr. Joneses from straying to restaurants. Perhaps she remembered, also, the slogan, "Why does *Crisco* digest easily? Its pure, sweet taste will tell you." And therein lies the tale. For such considerations tell Mrs. Jones absolutely nothing about the digestibility of anything, which is determined by difficult and tedious tests in laboratories and not by "pure, sweet tastes", and we are advised by technologists who have studied this question that common vegetable shortenings are far from being perfectly digestible;

some of them may be responsible for digestive disorders.

The normal temperature of the body is 98.6° Fahrenheit. Part of the fats in most vegetable shortenings become liquefied only at temperatures higher than 98.6°. These high-melting-point fats may persist as solids in the body and so remain in an indigestible state in the intestines for several days, causing intestinal putrefaction and interfering with the digestion of other foods. Shortenings frequently include both high- and low-melting-point fats, and when they are used over and over again—as the makers of these new long-lasting fats advise—the low-melting-point part of the shortening may boil off, leaving behind the high-melting-point part—the part that may give Mr. Jones a bad case of indigestion the next time his wife serves fried potatoes. The indigestion will not, of course, be attributed to shortening. If Mr. Jones suffers from some stomach or intestinal disorder three or four days after a generous helping of potatoes fried in a sweet-tasting and pure-looking compound, an informal conference of the Jones family will probably decide that the cause was his bolting of his breakfast ham and eggs that morning to catch the 8:33 train.

If you are a healthy young athlete, you may skip the next few pages on the subject of dried fruits, for the heavy dosing of sulphur dioxide in almost all

dried fruits probably will not, according to Government tests, injure healthy young athletes—if they don't eat too much of them.

Fruits such as apples, apricots, pears, and peaches turn brown when they are sliced and dried. To prevent discoloration and to improve the appearance of the dried fruit (and often to increase its moisture content so that water can be sold at fruit prices) the driers expose the fruit to fumes of sulphur dioxide gas. Many years ago, the experts of the Department of Agriculture decided not to allow more than 350 parts of sulphur dioxide gas for each 1,000,000 parts of fruit, so as to make sure that there would not be enough sulphur dioxide to injure those eating the fruit. Furthermore, it was decreed that packages containing fruits coated with sulphur dioxide must be labeled to show the presence of the preservative as a warning to purchasers. Nevertheless, the dried apricots and other dried fruits delivered this morning to a million kitchens contained from three to five times as much sulphur dioxide as was originally considered the safe maximum; and there is not even an indication of the presence of this substance, since Mrs. Jones gets her apricots in a paper bag, and not in the original packing box.

Although a publicity agent for the Department of Agriculture still insists that 350 parts per million is the maximum sulphur dioxide content permitted by the Department, the fruit growers were long ago advised by a Secretary of Agriculture that they

could use *any* reasonable amount of sulphur dioxide without interference from the Department. "Reasonable" is one of the most elastic words in the English language; to dried-fruit packers, reasonable amount has meant any amount, and they don't give a hang, nor can they tell, whether or not it is safe for the average man and woman. It is common, therefore, to find dried fruit on the market with five times as much sulphur dioxide as was originally considered the safe maximum limit.

Back in 1911, the Department of Agriculture had a study made by a Board of Consulting Scientific Experts, on sulphurous acid and sodium sulphite. The report of this board was never published; and there appear to be the best of commercial reasons for its having been suppressed. A carbon copy of the report in the files of the Department of Agriculture was examined by Alfred McCann in 1929. It showed that sulphur dioxide in very small quantities was probably harmless to the young men (athletes) on whom tests were made. How reassuring this is to those of us who are not young athletes; whose resistance to poisons has been weakened by sickness or overwork; or who may be suffering from ailments affecting the kidneys, the organs that must carry a large share of the burden imposed on the body by the addition of preservatives and color-improvers in food!

The Consulting Scientific Experts did find that sulphur dioxide in quantities of from three-tenths of

a gram to a gram daily (three-tenths of a gram might be taken with six or eight ounces of dried fruit) gave rise in some individuals after a period of some months to symptoms indicating injurious effects. The symptoms noted were: "increase in uric acid, destruction of white corpuscles, belching of sulphur dioxide gas, teeth 'on edge,' inflammation of the mucous membrane of the mouth, symptoms of malaise, headache, backache, sick appearance, nausea, albuminuria, sensation of cold, white color (anemia), dull eyes, listless manner. . . ."

Unless there is a cult of dried-fruit eaters, it is not likely that very great numbers of persons will eat several ounces of such food daily. But if several ounces will injure a healthy young athlete during a short test period, a far smaller quantity is likely to injure one suffering from even a slight ailment affecting the kidneys. It is possible, also, that smaller quantities taken more or less regularly over long periods would injure the rest of us who are in ordinary health. These things we do not know with absolute certainty; the curiosity of the Consulting Scientific Experts was satisfied when they found that small quantities of sulphur dioxide would not injure young athletes, and they carried their experiments no further. But if we cannot be sure that small quantities of this preservative are injurious, neither have we any right to assume that they are safe. Here again, the consumer should not be made the guinea-pig in a one-sided experiment in which the producer

is, as always, the sole judge of results; in which the results are nearly always predetermined by commercial interest. Do you think the sulphur-dioxide-coated fruits are partly responsible for your kidney trouble, Mrs. Smith? Can you prove it? No? Then it isn't so, runs the fruit man's argument. Well, perhaps it isn't so; but until proof is forthcoming, the consumer might well demand that the Department of Agriculture limit the amount of preservative permitted in dried fruits.

There is, in fact, some hope for limitation since the Federal Food and Drug Administration is keenly aware of the economic needs of the fruit growers' coöperatives and drying plants even if it is not concerned with the health of the consumer. Witness the following testimony of Dr. W. W. Skinner, assistant chief of the Bureau of Chemistry and Soils, Department of Agriculture, at the hearings on the Agricultural Appropriation Bill for 1929:

"The apricot . . . darkens very rapidly after it is cut, so that it is necessary—it has been necessary up to this time—to fumigate apricots, peaches, and pears, with fumes of sulphur, burned sulphur, sulphur dioxide.

"That technology has developed, and it has gone, we believe, entirely too far. It has gone so far that the American dried fruit is now in very considerable disfavor abroad.

"In fact, England, France, Germany, and Switzerland have placed partial embargoes on American dried fruits because of the excessive sulphur content. Japan—

I do not think it is in operation yet—but Japan has intimated that a complete embargo will be placed on American dried friut. . . .

"[We believe that] this enzyme [the cause of the darkening] can be controlled in other ways than by the use of sulphur dioxide. If we can do that, it means the salvation of the whole dried fruit industry and particularly that part of it in California where sulphur is so largely used."

Just as the permitted amount of poisonous arsenic-spray residue on fresh fruits in the American market was reduced because of the threat of foreign embargo, so there is the possibility that the sulphur dioxide content of dried fruits will be reduced in order to save foreign markets. Let us be thankful for the captious foreigners, and their food and drug administrations.

The Smiths, the Browns, and the Joneses eat dried fruits only occasionally perhaps, but they eat bread three times every day (six-year-old Jimmy, who likes it with jam, eats it five or six times a day).

"Surely, bread is perfectly safe!" you will say. "If we can't trust bread, then we can't trust anything." Well, white bread, which most of us eat most of the time, may not be perfectly safe; in fact, it may be one of the most dubious foods we eat, simply because we eat so much of it day after day and year after year. White bread is suspect on two counts. The first is that with most yeast, in commercial breadmaking, there are used "yeast foods"

—potassium bromate, and other chemicals. Our own food officials have never taken the trouble to investigate the long-time effects of small amounts of potassium bromate on the body; but the French officials consider it harmful, and have banned its use in France. Our officials sometimes take the attitude that what's bad for a laboratory guinea-pig is bad for a human being; but here, apparently, they feel that the gap between an American and a Frenchman from a pure-food point of view is greater than the gap between an American and a guinea pig.

The second count against white bread is on the score of the poisonous chemicals used for bleaching the flour from which all but a few American white breads are made. The use of bleached flour in commercial bakeries is so universal in this country that it is safe to assume the presence of bleached flour in all white bread sold without some special designation.

The doubts which exist on the subject of improvers and bleaches are concisely put by Professor Edwin Oakes Jordan, of the University of Chicago, in his book *Food Poisoning and Food Borne Infection:*

"It is generally admitted that there is no positive evidence that the substances commonly used in flour treatment, such as chlorine, nitrogen trioxide, and benzoyl peroxide, make the flour harmful. On the other hand, the use of these chemicals does not add to the nutritional value of the flour, increases the cost of a universal foodstuff, and may possibly be injurious to

consumers. A committee of the British Ministry of Health, while admitting that feeding experiments on rats were inconclusive and while expressing unwillingness to recommend the complete elimination of the bleaching agents and 'improvers,' nevertheless state it as their opinion that chlorine, nitrogen trioxide, and benzoyl chloride should not be employed."

A French writer on this subject, M. Labat, is quite sure that the bread that we Americans eat constantly is dangerous. He says, according to an abstract in the *Bulletin of Hygiene:*

"The danger of chronic intoxications following the persistent use of bread made with flour that has been bleached and artificially matured by means of chemical improvers is held to be sufficiently well established to make the absolute prohibition of the use of any chemical improver in France highly desirable."

Since bleaching does no good as far as the consumer is concerned, and since the demand for it is based solely on the supposition that the public favors whiter bread, perhaps we should heed those authorities who believe that bleached flour used continuously for many years is harmful, and bring the use of bleached flour to an end. This could be done in either of two ways. The first would be through the agency of the marvelous conditioning apparatus developed by the geniuses of the advertising and publicity arts to reëducate the public to accept a faintly tinted bread as the better bread to eat. The job would

be child's play to Ivy Lee or Edward Bernays or Bruce Barton's advertising agency, if the National Institute of United Bakers of America (if there were such a body) would hire them to do it.

The second method would be through the proper enforcement of the Federal Food and Drugs Act. Once upon a time the Food and Drug Administration considered bleached flour harmful, and in 1910 a shipment of bleached flour was seized. A jury in the United States District Court in Missouri upheld the action of the Administration, but the jury's verdict was set aside on purely technical grounds by the United States Circuit Court of Appeals and by the United States Supreme Court, and retrial of the case was ordered.

In its decision, the Supreme Court made a statement which has profound significance not only as it bears on the enforcement—and the non-enforcement—of the law with respect to bleached flour, but also as it affects all other chemically treated and preserved foods. It will be worth our while to examine this decision, for it shows how the simple interpretation of the one word *may* by officials charged with the enforcement of food laws can affect our health and—when the officials decide that *may* means *must*—can shorten our lives. Only a brief part of the Supreme Court's unanimous decision need be quoted here. It was written by Mr. Justice Day:

"It is not required that the article of food containing added poisonous or other added deleterious ingredients

must affect the public health, and it is not incumbent upon the Government, in order to make out a case, to establish that fact. The act has placed upon the Government the burden of establishing, in order to secure a verdict of condemnation under this statute, that the added poisonous or deleterious substances must be such as may render such article injurious to health. The word 'may' is here used in its ordinary and usual signification, there being nothing to show the intention of Congress to affix to it any other meaning. It is, says Webster, 'an auxiliary verb, qualifying the meaning of another verb by expressing ability, . . . contingency or liability, or possibility or probability.' In thus describing the offense Congress doubtless took into consideration that flour may be used in many ways—in bread, cake, gravy, broth, etc. It may be consumed, when prepared as food, by the strong and the weak, the old and the young, the well and the sick; and it is intended that if any flour, because of any added poisonous or other deleterious ingredient, *may possibly* injure the health of *any of these*, it shall come within the ban of the statute." (Italics ours.)

Despite this clear mandate to the Food and Drug Administration from the Supreme Court, the case against the shipment of bleached flour was not retried by the Government law officers, but was settled by compromise involving the destruction of the shipment *because it was adulterated*. Then, in 1920, the Department of Agriculture announced that on the basis of the Supreme Court decision it would not concern itself with bleached flour on the score of

harmfulness until evidence should become available "that the bleaching of flour introduces an ingredient in minute quantities which has the effect of rendering the article injurious to health."

Where the Supreme Court said that it is not incumbent upon the Government to establish the fact that an article of food *is* injurious to health, but only that it *may possibly* injure the health of the weak, the old, or the sick, the Government, with its usual sensitiveness to commercial interests, chose to misinterpret the court's decision in favor of the flour bleachers; to wait until, perchance, the bleachers themselves would come forward with evidence that bleached flour is an unmistakable menace to public health. With this decision, the Food and Drug Administration fell into a deep sleep, so far as bleached flour is concerned. Should they ever wake up and decide to enforce the law, to insist upon a straightforward execution of the Supreme Court decision, they will wipe out a reckless and unnecessary menace to health.

Baked goods in general are subject to many kinds of contamination, chemical, and other. There are commonly employed in the manufacture of baker's breads, pies, and pastries, ingredients of such low grades that no housewife would consider their use in her own kitchen. Special low grades of dried and frozen eggs, many months old; special low grades of butter, and indigestible high-melting-point shortening fats to make cakes and pies stand up under de-

teriorating influences such as transportation, rough handling, and window display; abnormally low grades of canned fruits, and fruit pastes loaded with artificial color and preservatives—all these are used freely in making pies, tarts, cakes and other bakery products. Hardly anything used in the commercial bakery, even the flour, is as good as the ordinary kitchen grade. All or nearly all are second-rate, cheap, and nasty, and a large proportion are dangerous to health. And note this: no baker or any other local remanufacturer of food is required to impart to his customers a single word regarding these unsavory ingredients in "bakery goods". One of the weakest links in the flimsy chain of consumers' defense is this toleration of any remotely edible substance in preparing manufactured or compounded foodstuffs.

The pure food laws have accomplished one great good: where a few decades ago poisonous preservatives such as formaldehyde, salicylic acid, and boric acid, were in common use, today they are less frequent, though they still appear occasionally in illegal uses. Other preservatives are, however, still permitted. Next to sulphur dioxide, perhaps the most common is benzoate of soda. There is benzoate of soda in the bottle of cider or fruit syrup delivered by the grocer's boy. Is it harmless? Here again, we have the same doubts. Dr. Harvey W. Wiley, who was responsible for the enactment of the Food and Drugs Act in 1906, and who was in charge of the en-

forcement of the Act until 1912, when his failure to submit to commercial expediency forced his resignation, carried on extensive experiments with his "poison squad" to determine the harmfulness of preservatives. He concluded that benzoate of soda was definitely injurious and should not be used. Other investigators decided that benzoate was harmless. Contrary to the intent of the law, but strictly in accordance with Governmental custom, the doubt was resolved in favor of the manufacturers; if the stuff was harmful, let some one eat a food preserved with it, and die instantly as proof. It is noteworthy that the use of this preservative is banned in France.

Edwin Oakes Jordan believes that benzoate of soda is one of the least objectionable of preservatives. Nevertheless, he says, with respect to it:

"It must not be forgotten that all such substances owe their preservative or antiseptic power to the poisonous effect they have upon bacterial protoplasm [the body-stuff of germs]. It is fair to assume that, in general, bacterial protoplasm is no more easily injured than human protoplasm, and this raises at once the propriety of bringing into repeated contact with human tissues substances likely to produce injury even if such injury is slight and recovery from it is ordinarily easy. In every case the burden of proof should be properly placed on those who advocate the addition of bacteria-restraining substances to food intended for human consumption. It is for them to show that substances powerful enough to hold in check the development of bacteria

are yet unable to interfere seriously with the life processes of the cells of the human body."

Perhaps more important than the harmfulness of benzoate of soda itself is the fact that it encourages the use of partly decomposed raw products in food manufacture, and insanitary methods of preparation. When materials and methods are of the best, benzoate of soda has no place whatever in food manufacture, a fact which three of the better manufacturers—Beechnut, Heinz, and Columbia Conserve Company—themselves insisted upon.

One of our modern national institutions is hamburger. At the moment you read this, thousands of hamburger sandwiches, generously covered with salt and pepper, mustard and onions, are being served in thousands of restaurants, cafeterias, "diners", and hot-dog stands; and more thousands of housewives are ordering chopped meat to transform into fried hamburger in their own kitchens. The hamburger habit is just about as safe as walking in an orchard while the arsenic spray is being applied, and about as safe as getting your meat out of a garbage can standing in the hot sun. For, beyond all doubt, the garbage can is where much of the chopped meat sold by butchers belongs, as well as a large percentage of all the hamburger that goes into sandwiches. The fresh red color you see on chopped meat may

be no more natural than the green color of St. Patrick's Day carnations; it may be there only by grace of a generous dosing of stale, partially decomposed meat with sodium sulphite. This preservative not only restores the color and appearance of fresh meat, but also destroys the odor of putrefaction. Eating putrid meat is not the only risk you run when you order hamburger; the sulphite itself is one of the most severe of all digestive and kidney hazards.

Quantities of chopped meat preserved with sodium sulphite are constantly being seized by food inspectors in the very few States which have any effective inspection. In one State 71 out of 76 samples of hamburger picked up by inspectors were illegally preserved. But so easy and profitable is the fraud, and so slight the punishment, that it goes on with little abatement anywhere. How serious this situation is in the majority of States can only be left to the imagination; it must be remembered that the situation is likely to be much better in States reporting these conditions than in those States where the food control agencies see no evil, hear no evil, smell no evil.

Most of us are not aware that there is any added chemical in the ham which furnishes the *pièce de résistance* at so many of our meals. If we think about it at all—which is most unlikely—we probably regard the process of preserving hams by smoking as something like cooking or refrigerating in its effects. But, says Jordan, "the chemicals deposited by wood

smoke in meat are of a particularly objectionable nature, and their continuous ingestion may quite conceivably lead to serious injury." Our diet frequently includes bacon for breakfast, ham for dinner, occasional smoked sausages, and dried beef, all of them smoked. If these meats happen to be favorites, the amount of the objectionable chemicals deposited by wood smoke ingested during the course of several years can indeed be a serious matter. The expert on chemical preservatives writing in the eleventh edition of the *Encyclopædia Britannica* holds an exactly similar view to that expressed by Dr. Jordan.

On the whole, the housewife who buys a roast or a steak can be fairly sure that she is not going to feed her family chemical preservatives or decomposed meat; but she can be by no means certain that the roast or the steak is free of dangerous disease germs and disease products which had their origin in sick cattle or hogs. This, despite a Federal Meat Inspection Act and a force of Federal inspectors 40 times as large as the entire force of Federal inspectors available for the control of *all other foods and drugs;* and despite more or less extensive meat inspection by State authorities in many States.

The whole business of meat inspection is carried on in such a way as to prevent too great business losses to the great cattle raisers and meat packers, whatever the cost to the public health. The failure of meat inspection, and the risk that all of us run of

eating dangerously diseased meat, were brought to light a few years ago in a report of the National Civil Service Reform League. We can light up the whole subject by a brief quotation from this report:

"The United States Department of Agriculture is permitted to make and enforce regulations which to a considerable extent nullify the intent of the Meat Inspection Act, presuming that it was to eliminate diseased meat. Contrary to popular opinion, even the Federal law allows meat from tubercular animals and animals affected with 'cancerous' 'lumpy-jaw' (actinomycosis) to be passed as wholesome food. . . .

"Although the chief of the Bureau states that such a procedure 'would be entirely out of harmony with the requirements,' it is said that under the Federal regulations for meat inspection 'the carcass may be passed even though every organ in the body shows evidence of disease, provided the inspector is willing to consider them slight and limited, and if the animal be fat.' "

The report indicates beyond all possible doubt that inspectors are only too happy to find the disease "slight and limited." Says the report:

"The degree of 'loathsomeness' which makes it necessary to condemn food is determinable by the inspector according to some provisions, and it is not to be wondered at if he sometimes requires an extreme degree to merit condemnation when we consider the complacency of the nation with regard to the legalized source of some of the most terrible diseases which scourge the human race."

How does all this affect our health? We find a

partial answer applying both to diseased meat and to the milk from diseased cows, in a footnote of the report, quoting from "Food and Public Health," by Dr. W. G. Savage:

"Following the careful summaries of Cobbett, it may be said that about 18 per cent of tuberculosis of the brain and its membranous wrapping, about 51 per cent of tuberculosis of the abdomen, half to three-quarters of all cases of tuberculosis of the glands of the neck, and probably about 20 to 30 per cent of tuberculosis of the bones and joints are of bovine origin.

". . . Cobbett has calculated that the mortality caused by infection with the bovine type at all ages is six per cent of all cases at all ages."

With more than 90,000 deaths from tuberculosis in this country annually, this means that over 5,000 Americans pay tribute with their lives each year to business forces which decree that we must eat diseased meat and drink milk from diseased cows so that they will not suffer unnecessary loss of profits. It is impossible even to guess how many more thousands die each year from other diseases contracted in the same way.

It is unlikely that many of us will be infected with any of the more deadly forms of food poisoning, from eating the canned salmon that comes from the grocer. Technological improvements in the canning industry have made acute poisoning comparatively rare. Nor are harmful preservatives ordinarily found in canned fish. The danger here is that part of the fish will be

decomposed, and, according to Jordan, "It cannot be assumed that the irritating substances produced in food by certain kinds of decomposition can be continually consumed with impunity." How careless the fish canners are, even those who advertise extensively, can be judged from the following recent cases from Food and Drug Administration "Notices of Judgment":

For example, the "Notices" report the seizure of 1,252 cases (22,500 cans) of Happy Vale Brand Pink Salmon, shipped by Libby, McNeill & Libby, a somewhat smaller amount of salmon packed for the West Sales Company of Seattle, Washington, and 425 kegs of salt mackerel of the Davis Bros. Fisheries Company, Gloucester, Massachusetts, all of which consisted "wholly or partly of a filthy, decomposed, or putrid animal substance"—recognizable in less legal language as tainted or spoiled fish.

Such seizures appear in almost every issue of the Notices. The few Government inspectors concentrate as much as they can, or know how to, on suspicious shipments, but the pitifully small force of inspectors available for this work makes it impossible for them to remove from commerce more than a small percentage of canned goods which the Government so graphically describes as "filthy, putrid, and decomposed." There is, to be sure, a factor of safety when the decomposition has gone far enough to justify this classic description; it is unlikely that anything very putrid will be consumed. This safeguard does not

operate, however, in earlier states of decomposition of canned foods, especially when the purchasers are among the millions who cannot afford the luxury of rejecting from their limited food supplies anything about which their nose gives them a faint doubt.

A very serious menace to our health in the foods we eat results not from the preservatives or decomposition nor from the nature of the raw products entering into the foods, but from the careless, insanitary handling of food products both in production and distribution.

A measure of the almost universal lack of perfect sanitation, which the public has the right to expect in food producing and distributing establishments is found in the March, 1932, Bulletin of the Indiana State Board of Health. The Board's inspectors examined 251 bakeries, confectioneries, drug stores, fish stores, fruit and vegetable stores, groceries, meat markets, poultry and produce markets, public eating places, and slaughter houses. *Not even one* out of the 251 establishments was given the rating "excellent" by the inspectors. Only 97 were rated good, and the sanitary condition of 152, or 60 per cent, was rated only "fair".

The combination of open garbage cans and toilets at the rear of a store, flies, and unprotected foods constitute a frequent serious menace to our health, even in shops which show outward evidence of cleanliness. H. G. Wells and Julian Huxley note this problem in their book, "The Science of Life". They say:

"Often meat and other foods which have been exposed for sale in shops are badly infected with bacteria, partly because of microbe-bearing dust settling on them, and partly by the agency of flies."

Because it is an excellent germ-breeder, milk is probably the worst offender among germ-carrying foods. The annual report of the Massachusetts Department of Health for 1930 states that nearly a million persons in Massachusetts (one-fifth of the total population) were daily exposed to milk from potentially tuberculous cattle. Much of the milk sold was found to be of higher bacterial count than the maximum stipulated by the State laws. There is not space here to discuss what is already widely known: that the handling of milk prior to its sale, particularly raw milk and loose milk, is such as to constitute an intolerable and widespread menace to health—almost as though Pasteur had not been born.

Evidence of other hazards is given in the Massachusetts report:

"Eighteen samples of soft drinks were collected, of which 12 were reported as adulterated. . . . There are included the results of the examination of bottles intended to hold soft drinks, the bottles being taken from the case as they were about to be filled. They were ex-

ceptionally high in bacterial content, showing improper sterilization of the bottles. . . .

"There were 376 samples of shellfish examined bacteriologically, of which 133, or 35.4 per cent, showed evidence of sewage pollution."

Baked goods, eaten in the home without any further heating, can be a serious hazard if they are contaminated with bacteria. Both local boards of health and the State health department in Massachusetts inspect bakeries. The local boards in 1930 examined 3,771 bakeries, and found it necessary to give warning in 751 cases. The State department inspected 365 bakeries, and notice of defects was sent to the local boards. "The principal violations discovered were dirty floors, walls and ceilings; stock not properly protected from contamination; products not properly protected; toilets not constructed or operated as per the regulations; a profusion of flies; absence of garbage can; and general unsanitary conditions." Let it not be supposed that these conditions are peculiar to Massachusetts; they are probably worse, not better, in most other States, for Massachusetts is one of the most thorough of the States in its food control work.

III

A STEADY DIET OF ARSENIC AND LEAD

SIX THOUSAND poisonings, 70 deaths in England in the year 1900, from beer containing small quantities of arsenic. . . . Three hundred French sailors poisoned early in 1932 by wine contaminated with arsenic. . . . A girl, aged seven, killed by arsenic fumes from dye in moldy wall paper. . . . Six persons poisoned in California in 1931 by greens sprayed with lead arsenate. . . . A four-year-old Philadelphia girl dead, in August, 1932, from eating sprayed fruit. With a background of cases like these, are you willing to have even very small doses of arsenic, a deadly poison, administered to you and your children daily, perhaps several times daily? Willing or not, if you eat apples, pears, cherries and berries, celery, and other fruit and vegetables, you are also eating arsenic, and there is good reason to believe that it may be doing you serious, perhaps irreparable injury.

The source of this dangerous poison is the lead arsenate which is sprayed on fruits and on some vegetables to protect them from the coddling moth and other insects destructive to crops. It is extensively used, especially in the Western States, which produce

our most attractive and unblemished fruits. A residue of arsenic and lead remains on the fruit, and when you wash your apple or pear under the faucet you remove only a small part of the poison. The fruit grower, however, can, under Government direction, remove the poison almost completely with a wash of dilute hydrochloric acid.

But the Federal Food and Drug Administration, proceeding on the unproved theory that arsenic in small quantities is not injurious to your health, permits the grower to market fruit and vegetables contaminated with 12/1000 of a grain of arsenic, in the form of arsenic trioxide, per pound of fruit.

Twelve-thousandths of a grain is today the legal limit, but with numerous fruit growers completely unequipped for removing the spray residue, with the staff of Government inspectors available for fruit inspection far too small to exercise more than a fraction of the necessary supervision, and with the Food and Drug Administration,* in its usual fashion far more concerned about the economic interests of the growers than about the health of the public, one must be blind to suppose that a large part of the supply of apples and pears and many other fruits and vegetables is not contaminated with far more arsenic than is legally permitted. In the Northwest, after a dry season in which an unusual amount of spraying was necessary, apples were found to be

* Consumers' Research General Bulletin 2 discusses the illogical and unworkable dual concern of the Department for public health and for agriculturists' income.

contaminated with more than ten times the legal maximum of arsenic. Of four samples of California apples and pears purchased in New York City in August, 1932, three carried arsenic above the legal limit. Two carried twice the legal limit.

What little protection we consumers have against the poisonous arsenic residue we owe to the action of British health authorities who threatened to ban the importation of any American apples carrying more than 1/100 of a grain of arsenic trioxide per pound of the fruit. The testimony of officials of the Department of Agriculture during the agricultural appropriation hearings for 1929 offers illuminating evidence on this point. Dr. H. G. Knight, Chief of the Department's Bureau of Chemistry and Soils, and Dr. W. W. Skinner of the Bureau testified in answer to questions of the Senate Committee on the subject of arsenic and lead hazards. The following is a bit of the testimony:

DR. KNIGHT: Arsenic and lead?

SENATOR JONES: Yes; which you have just stated.

DR. KNIGHT: That has been bothering us here for several years.

SENATOR JONES: *But you have not been working at it?*

DR. SKINNER: It is only comparatively recently that the health situation due to these insecticides has been appreciated. *England's work first brought it prominently to our attention.*

SENATOR JONES: It was brought up here six or seven years ago. I know that very definitely. *I was wondering*

why you had not studied it before now. Well, you have not, so there is no answer to that. (Italics ours.)

It is noteworthy that the action of the British Royal Commission on Arsenical Poisoning, which *as far back as 1903* set up a limit of permissible arsenic of 1/100 of a grain per pound, went unheeded by American food officials for over twenty years. Not until American apples were banned from foreign markets—no longer a threat merely to the health of consumers but a threat to the economic interest of producers—did the food officials take action. And what action! The British threatened American fruit exports in 1925. In 1926, limitation of arsenic contamination was attempted. In 1927, the Federal Food and Drug Administration declared that while apples intended for export must not bear a residue of more than 1/100 of a grain of arsenic trioxide per pound, *apples intended for domestic consumption would be permitted to carry two and one-half times the safe limit of arsenic!* Nevertheless, we have every reason to be grateful to the British authorities, for before 1926, apples were legally sent to market with any amount of arsenic that happened to remain in and on them, even if it were ten or twenty-five times the safe amount.

In 1927, said the Administration, we will permit *two and one-half* times the safe limit of arsenic on apples for domestic consumption, but by 1928, the arsenic spray residue must be down to that limit—

1/100 of a grain per pound. But when 1928 rolled around, the Administration again found it inexpedient to force the fruit growers to adopt this limit, and the new tolerance on apples for domestic consumption was set at *twice* the safe limit. By 1931, it had been reduced to *one and one-half times* the safe limit, and for 1932 the tolerance has been set at *one and one-fifth* times the safe limit. But, unfortunately, this is only an occasionally enforced official arsenic limit.

Let it not be supposed that the removal of the arsenic residue from fruits is a difficult business requiring expensive equipment. As has already been stated, the cost of removing the residue from a bushel of fruit is less than five cents, in many sections of the country averaging about two or two and one-half cents. If the fruit grower cannot pay this cost, better that a Government grant should be made to have the work done efficiently and expertly, as a frank subsidy to fruit growers—and eaters—than to let the poison enter our food supply. If something of the sort is not done, it merely means that what the farmers and our government save we consumers shall all spend on medical care, and on antidotes for arsenic poisoning, many times over.

Says D. F. Fisher, principal horticulturist of the United States Bureau of Plant Industry, in the *Journal of Economic Entomology* for April, 1931:

"Viewing the problem in a broad light, after passing through the fiery upheaval which has attended its in-

troduction into various parts of the country, one comes to the conclusion that the psychological aspects of spray residue removal, rather than the attendant technical difficulties, are the factors which need greatest emphasis at the present time."

Apparently the "psychological" problems can be solved where embargoes by foreign countries are involved, but the solution can be delayed year after year where nothing more matters than the health of the domestic consumer.

The attitude of the Food and Drug Administration has been little short of brutal indifference. The Government officials have even suppressed important information on the arsenic hazard, and have resisted in every way the opening up of the question to discussion in the interest of public safety. The Government has acknowledged the hazards of excessive consumption of arsenic residues; it has permitted residues large enough to constitute a serious health hazard; yet we cannot find that it has uttered one word of warning to the public, or even so much as suggested mildly that apples and pears be peeled before they are eaten, or that the stem and calyx portions (the two ends of the "core") be cut away. This is the very least that should have been done—and should *still* be done—since peeling the fruit and cutting away the stem and calyx ends will remove almost all of the poisonous residue. If the consumer insists on eating the peel, perhaps for the higher vitamin

content in and near the skin of the fruit, he should at least cut away the stem and calyx portions where the concentration of the residue is greatest.

Although the Federal Food and Drug Administration has not until the last few months investigated the toxicity of arsenic in minute doses, and though indeed it confessed a few years ago that it had no information on the subject, it is, nevertheless, prepared to permit the presence of 1/100 of a grain of arsenic trioxide in each pound of fruit from now till doomsday—or at least until the British authorities threaten some new embargo based on a reduced limit. It becomes pertinent, therefore, particularly in view of the fact that most of the residue can be cheaply removed, to inquire whether even this limit is safe.

A German writer, K. Lendrich, believes that it is not safe and should not be permitted. According to a review of a study which he made, in the British *Bulletin of Hygiene*, Lendrich tested samples of American "export" apples for both arsenic and lead; he found that all contained arsenic, but the amount was in every case well below the world tolerance. Yet, says the *Bulletin of Hygiene*, "Lendrich is not satisfied that it is safe to allow even these amounts of arsenic and lead, and, *seeing that Australia can dispense with them altogether*, is of the opinion that other countries should be made to do so also." (Italics ours.)

Perhaps the most thoroughgoing of recent investigations of arsenic poisoning have been made at the

New York Skin and Cancer Hospital. C. N. Myers and Dr. Binford Throne of this hospital reported before the American Chemical Society in 1931 that mild cases of arsenic poisoning, usually unsuspected by either physician or patient, are frequent. Their investigations had shown that arsenic was the factor causing "bald spots" or "patch baldness", and also loss of pigmentation and certain types of abnormal pigmentation of the skin. They attributed the arsenic largely to the "increased use of arsenic spray for the destruction of insects."

Earlier, Myers and Throne had analyzed the blood and urine of several hundred adult patients suffering from eczema, in an effort to discover whether arsenic was a cause of this ailment. They concluded that in about 30 per cent of the cases arsenic was a factor of great importance. Further study by Myers, Throne and Laird S. Van Dyck on eczema in infants and young children supported this conclusion. They discovered arsenic in the urine specimens of 55 out of 105 children with eczema or urticaria (a related disease). Eleven children not suffering from eczema were used as controls, and the urine of only one of these contained any arsenic, that of ten being completely free of the metal.

In their report these doctors state:

"Attention has been repeatedly called to the contamination of fruits and vegetables from the use of insecticides, such as lead arsenate. Increased emphasis must be placed on the danger from this source since

Vogel has found arsenic not only on the skin of certain fruits, but even inside the fruit itself. . . . It is possible that many cases of so-called 'ptomaine' or food poisoning are really cases of metallic poisoning." (Arsenic is one of the deadly metallic poisons.)

How much arsenic do these investigators consider harmful? Their report includes a table of the arsenic content of foods in which this metal has been found. Most of the fruits and vegetables analyzed had less than one part of arsenic in each ten million parts of the food, often coming from the soil by growth processes and not added in any way by man's artifice, (except in the heavily contaminated fertilizer applied to the soil). But still our food officials are willing to proceed on the theory that continued doses ten or twenty times as great as this are to be disregarded.

Perhaps no one would have eczema, patch baldness, or even discolored skin due to arsenic if arsenic were taken into the body only with one or two fruits or vegetables containing but one part in ten million of arsenic; but with a large number of these and other foods contributing their daily quotas, the danger is many times compounded. Let us refer again to the report above quoted to see just how arsenic ramifies through our food supplies. The following is a list of foods in which, the investigators state, arsenic was found: peas, carrots, apples, mushrooms, pears, rice, beef, veal, mackerel, eggs, potatoes, cauliflower,

spinach, white beans, cabbage, lettuce, dried peas, dried fruits. Tests on a few samples made for Consumers' Research in September, 1932, showed the presence of important amounts of arsenic in stick candy, breakfast cocoa, and cigarettes. The decision of the Food and Drug Administration to permit permanently a residue of 1/100 of a grain of arsenic trioxide in each pound of the fruit or vegetable must be judged in the light of these findings indicating the probability of entry of arsenic into the body in many ways rather than with only one or two foods.

Arsenic is not, however, the only poison in fruits and vegetables with which we consumers must contend. Lead, the other metallic residue of lead arsenate spray, is certainly far more dangerous. But here we find a curious situation. Lead is a cumulative poison. Part of the lead taken into the body is stored and may become dangerous to the point of disaster when enough of the metal has collected. The amount necessary to cause noticeable symptoms depends upon the health and ruggedness, or personal peculiarities, of the individual concerned. The Food and Drug Administration admits this hazard and states that no residue of lead whatever is permitted on fruits and vegetables coming to the market. Despite this, there is not the slightest evidence that any effort is being made to enforce this drastic dictum. Nowhere do the Government's technologists tell the farmer how he

can remove *all* of the lead from the residue of the lead arsenate (which is a chemical compound containing both lead and arsenic) while leaving 1/100 of a grain of arsenic trioxide. If apples contain less than the permitted tolerance of arsenic, the farmer is not asked to concern himself over the amount of lead the apples carry. When Lendrich, whose report has already been cited, tested American apples, he found that not a single one of 45 samples was free of either arsenic or lead, and there was about *60 times as much lead as arsenic trioxide* on some of the apples. In later tests, after the threat of embargo had resulted in the removal of some of the residue, he found the amount of arsenic well below the world tolerance, but there was still from *three to 18 times as much lead as arsenic trioxide*. The tests of the four apples and pears purchased in New York City in August, 1932, showed appreciable amounts of lead on each sample.

The deception which is being practised upon the American public by the Food and Drug Administration is both dangerous and vicious. Instead of urging an immediate governmental subsidy which will make it certain that the farmer will remove a dangerous poison from his produce before marketing it—not sometimes, but every time—the Administration is content to bury the whole question in silence, intimating, when forced to answer an inquiry, that no residue of lead is permitted.

If spray residue on fruits and vegetables were the only source of lead, the results of the deception would

not be so important. With the body storing this cumulative poison from many sources, however, the menace becomes more serious. Some of the more important sources of lead are drinking water which has run through lead pipes, acid drinks which have been in contact with lead-glazed enamelware or earthenware, lead used as a dressing and adulterant in silk garments, and lead paint on toys and furniture.

The hazard of lead poisoning, particularly to children, who frequently have an amazing appetite for paint, is so serious that it will be worth our while to note what authorities say about it.

Dr. Edward C. Vogt of the Infants' and the Children's Hospitals in Boston, for example, recently reported that "lead poisoning in children is more common than generally suspected and may be the cause of obscure neurologic and gastro-intestinal complaints."

"Lead poisoning in children produces a severe and dangerous form of cerebral involvement," according to a recent issue of the *Journal of the American Medical Association.*

A review in the *Bulletin of Hygiene* states, "We have no knowledge of the exact amount of lead necessary, [to cause poisoning], or of idiosyncrasies in children who develop plumbism [lead poisoning]. Slight degrees and atypical forms seem more common than is suspected. Many children are pale, listless, backward; they may be without appetite, may have abdominal sensations and even colic; others have

headache, possibly a faint blue line on the gums, or even suspicions of foot or wrist drop. . . . As a diagnostic point the possibility of exposure to lead risks has to be thought of."

It must be evident from these statements that every possible source of lead poisoning should be eliminated forthwith; that, above all things, a lead-arsenic residue should not be permitted to remain on food. The Federal food and drug officials find it very easy to sympathize with the fruit grower, to whom residue removal is but another vexing problem. Either lack of imagination or indifference hides from these officials the fact that they may be contributing to the wholesale poisoning of both children and adults. Probably most cases of slight lead poisoning are never recognized; why should a branch of a Government department supported by Congress primarily to help the farmer be concerned over the lassitude, physical weakness and headaches of a few hundred thousand school children (not to mention adults)?

If the fruit growers and farmers cannot spend the moderate sum necessary to install adequate equipment for removing spray residue, let the Government supply the equipment, or establish numerous residue-removal stations where fruit and vegetables can be cleaned—and tested—before marketing. The Department of Agriculture now spends fifty or a hundred times more on other activities designed to improve crops and eliminate insect pests than the total cost of food and drug control. Nothing but ordinary offi-

cial complacency prevents the responsible officials from seeking a remedy for the spray residue situation. Even though the problem concerns only protection for public health and not increased income for farmers and fruit growers, it should nevertheless be possible to find funds and experts to reach a solution.

When the officials of the Department of Agriculture again consider this problem, may we recommend that they have the following statement framed and kept constantly in view? It was made many years ago by Dr. A. J. Carlson of the Hull Physiological Laboratory of the University of Chicago:

"Speaking as a physiologist interested in public health I should say that the question is not how much of the poison may be ingested without producing acute or obvious chronic symptoms, *but how completely can man be safeguarded against even traces of the poison. There is no question in my mind that even in less than the so-called toxic doses lead and arsenic have deleterious effects on cell protoplasm, effects that are expressed in lowered resistance to disease, lessened efficiency and shortening of life.*" (Italics ours.)

IV

PRESCRIPTIONS, MAGIC, AND POISON

THE ADVENT of the professional, high-pitched merchandiser and "creative salesman" on the American scene banished from drug store windows the illuminated globes filled with gorgeous fluids, the jars of herbs and roots, the rock candy, horehound drops and similar delicacies, and substituted a profusion of neat and decorative bottles, jars, cartons, tubes, and tins packed with liquids, powders, creams, pastes, pills, pastiles, and bars for every conceivable purpose, and for many purposes quite inconceivable. These medicines and cosmetics are all familiar friends. We have seen their pictures and read their stories a thousand times in magazines and newspapers, on car cards and billboards. A hundred radio voices have dinned their virtues into our unwilling ears.

Can we use these preparations, most of them of secret composition, with safety? Modern merchandising technique demands that show windows be filled with popular articles that will bring passers-by into the store to buy. Thousands and hundreds of thousands of us use almost every one of the well-advertised preparations displayed in the drug store window. Is

that not a sufficient test of the safety or the wisdom of using them? The answer is No—an emphatic No. These bottles and tubes and cartons contain an amazing variety of poisons. Others are dangerous because we shall depend on them in emergencies—and they will be worthless.

Cosmetics and hair preparations, antiseptics and toothpastes make up the bulk of drug store window displays. Cosmetics and antiseptics are treated at length in later chapters. Let us therefore glance at only a few in the drug store window. Here, for example, is the widely advertised and sold *Othine* freckle remover and skin bleach. Naturally, you want to get rid of freckles; but do you want them replaced by disfiguring inflammation and dark splotches on your face? This is what may happen if you use *Othine*, which you are urged to buy in "double" or "triple strength". It contains ammoniated mercury, a dangerous, irritating poison. In some cases, mercury accumulates in the skin and the area over which it is used turns a dirty, dark color.

One tier higher in the window is *Kolor-Bak*, a hair "restorer" with lead acetate as its active ingredient —another poison that can cause you much unnecessary suffering.

As far back as 1927, Dr. Charles Frederick Pabst, dermatologist of the Greenpoint Hospital, Brooklyn, New York, urged (and, we need hardly say, quite unsuccessfully) a legislative ban on the interstate shipment of lotions containing mercury or lead,

which, he said, produced inflammation, opening the way for the entrance of poisons and bacteria into the system. But the drug stores are still selling dozens of preparations containing these poisons, and the window displays tempt beauty-seekers with a generous sampling of them; and no legislation anywhere effectively controls them, in city, state, or nation.

Of the 60,000 drug stores in the United States, probably half devote a large portion of their window space to "antiseptics" and mouth washes. Several million dollars are spent annually in magazine, newspaper, and radio advertising to convince a credulous public that only in bottled antiseptics lies sanitary salvation. Without them you will soon find yourself hairless, toothless, afflicted with halitosis and B.O., and a little later you will die a horrible death from a combination of twenty or thirty dangerous diseases the germs of which are lingering in your mouth or on door knobs, waiting anxiously to pounce on your vital organs the first morning on which you forget to gargle with *Listerine* or *Pepsodent*, or to wash your hands with *Lifebuoy*.

Almost without exception, such preparations are of trifling worth for the galaxy of purposes for which they are advertised. And their makers are guilty not only of poisoning the public mind with a stream of groundless fears which business enterprise can translate into dollars, but often of causing the postponement of proper treatment in cases where serious con-

ditions actually exist and demand treatment of unquestioned effectiveness.

The ineffectiveness of these preparations in serving their primary function as antiseptics or germicides will be discussed later. It is sufficient to say here that almost without exception the proprietary antiseptics commonly displayed in the drug store window cannot be trusted to destroy germs under ordinary conditions of use, and in the ways claimed in advertising; and whoever depends upon their antiseptic action in emergencies is taking a needless and foolish risk. Included in this category are such mixtures as *Listerine*, *Pepsodent Antiseptic*, *Borine*, *Odol*, *Boracetine*, *Vapo-Cresolene*, and *Sozodont Liquid*.

Before we enter the drug store, let us save one last glance for the rows of smaller cartons which evoke countless acres of inspired writing by the literary men of the advertising world, and fill the subway and trolley cards with an endless row of ivory smiles. Probably no other commodity has been responsible for so much downright and expensive lying by the respectable advertising agencies as toothpaste has. Despite all claims to the contrary, no toothpaste will keep your teeth from decaying, even if you use it ten times a day; no toothpaste that is safe for daily use will make your teeth white in one day, three days, or a thousand days; no toothpaste will prevent or cure pyorrhea or any other disease condition of the gums or mouth; no toothpaste will correct, except during an insignificant interval immediately following its

use, acid condition of the mouth; no toothpaste will destroy enough mouth organisms to make any difference in anyone's health or well-being. In other words, a toothpaste is simply a slight cleansing aid and nothing more*; and if you rely on it to cure pyorrhea or a mouth infection, you will suffer for your misplaced faith in the advertisers' honesty and therapeutic knowledge.

Except for such indirect injury, however, most toothpastes are harmless—most, but not all. Three of the widely advertised toothpastes in the druggist's window are actually harmful, or involve risk to the user. The first, *Pebeco*, because its principal ingredient is a poison; the second, *Pepsodent*, because it contains an abrasive which may do irreparable damage to tooth enamel; the third, *Kolynos*, because of its excessive soap content.

Two-fifths of each tube of *Pebeco* is potassium chlorate, a poison that has been responsible for dozens of deaths. In 1910 a German army officer committed suicide by eating the contents of a tube of *Pebeco*. What a toothpaste for children to use, or to be left within reach of infants! Stefan Ansbacher, writing in the *Journal of the American Medical Association*, states that several authors consider 8 grams of potassium chlorate a sufficient quantity to cause death. There are nearly 30 grams of potassium chlorate in each 2½-ounce tube of *Pebeco*.

* Dental specialists advise the use of a plain salt solution, or baking soda, or precipitated chalk, for cleaning the teeth.

The following excerpts will be valuable to those who do not wish to essay the rôle of guinea-pig in determining whether *Pebeco* is a safe dentifrice:

"Poisoning [from potassium chlorate] very frequently takes place accidentally . . . or by the swallowing of some of the solution given for gargling."—Sollmann's *Textbook of Pharmacology.*

"Recently a tooth paste containing 50 per cent of potassium chlorate has been widely advertised as an oral antiseptic. . . . Potassium chlorate has no more value in the oral cavity than an equal amount of sodium chloride (common salt), and, besides, it is a specific blood poison. . . . Clinical observation has further demonstrated the fact that the continuous use of this paste . . . produces inflamed and easily bleeding gum margins. The poisonous nature of potassium chlorate is manifested in a number of deaths which have resulted from its absorption when applied in solution or in substance on the oral mucous membrane."—Prinz's *Dental Materia Medica and Therapeutics.*

On the other side of the picture is the fact that the Council on Dental Therapeutics of the American Dental Association has seen fit to approve *Pebeco* because its "method of marketing" complies with the provisions of the Council. In announcing its approval the Council stated:

"Reports are frequently found showing the toxicity following the ingestion of large amounts of potassium chlorate, but *no reports are found* on the toxic action

following its use in a dentifricial manner, such as possible frequent or virtually continuous oral and gastro-intestinal absorption and effects on remote functions and organs, such as the kidney, in which a slow and insidious injury is conceivable. . . .

"*Owing to the lack of desirable evidence* on the actions of potassium chlorate under dentifricial conditions, the Council desires to point out the desirability of *conducting investigations* of chronic intoxication with small doses of potassium chlorate alone or in a dentifrice." [Italics ours.]

In other words: "Human guinea pigs, here's your chance to test potassium chlorate for dear old *Pebeco.*" In view of the expressed doubts of the American Dental Association as to the safety of *Pebeco*, a little less consideration for the manufacturer and a little more for the public might, at least, be asked for.

You use toothpaste to preserve your teeth, not to scratch away the enamel so that they will be an early candidate for painless dentistry. But such is the risk you take with *Pepsodent.*

The case against *Pepsodent* can be stated briefly. For all its advertising that its cleansing agent consists only of ultra-fine particles, careful microscopical investigations (1932) showed that *Pepsodent* contained large sharp angular particles; a coarse grit, including angular and needle-shaped particles, some one-tenth millimeter, or larger. Whereas the standard dental abrasive—precipitated chalk—can scarcely be felt when ground between the teeth, one

of the reporting scientists stated that *Pepsodent* felt very gritty when tested in this way. This is a simple and reliable test which any consumer can make for himself. Dr. Herman Prinz, Professor of Materia Medica and Therapeutics at the University of Pennsylvania, in his *Dental Formulary*, the leading work on the subject, says, "Tooth powders or pastes should not contain gritty . . . substances. . . . The wasting away of tooth tissues, usually referred to as erosion or abrasion, is largely the result of the continuous use of powders, pastes, etc., which contain more or less abrasive substances, as the late Miller has shown."

Our criticism of *Kolynos* toothpaste can also be drawn from Dr. Prinz's *Formulary*. He says:

"Soaps must be used very sparingly in oral cosmetics. A good tooth preparation should not contain more than 3 to 5 per cent of the best quality of Castile soap. Many of the commercial preparations, especially tooth pastes . . . contain by far too large quantities of soap. Soaps . . . are strong astringents and, in concentrated solutions, caustics.* If used in concentrated form, they have a tendency to lower the resistance of mucous linings of the oral cavity by maceration. Even the so-called neutral soaps, when employed in concentration above 4 per cent, invariably destroy the important salivary ferments [which digest and so act to remove

* For example, one who washes his face or hands and leaves soap, imperfectly washed off, will often suffer skin irritation from the slight film of soap remaining.

the starchy pastes adhering to the teeth and lodging in tooth crevices]."

Dr. Prinz gives 5 per cent as the maximum permissible soap content. *Kolynos* has four times as much.

Of the thousands of drugs, medicines and other preparations cluttering the shelves of every large drug store, hundreds are potentially poisonous or injurious. Cosmetics, antiseptics, and most types of patent medicines will be passed over for the present, as they are treated in later chapters. Of the rest, only a few typical preparations can be cited briefly; each represents a host of other similar preparations to be found in every drug store.

Although the pharmacist is a professional man who in most States has attended a college of pharmacy for from two to four years, the professional part of his activities—the compounding of prescriptions—occupies only a small part of his time. During the rest of the time he is, with rare exceptions, a merchant pure and simple, unconcerned with "professional ethics" and its social implications.* He will, therefore, sell you anything that an enthusiastic

* This is not said by way of blame for the individual druggist, who, as a matter of economic survival since a drug store has become a sort of cross between a department store open at night, and a lunch wagon, has no choice in such matters if he is to remain in the pharmacy business.

friend or a more enthusiastic and less considerate advertiser has persuaded you to buy.

If, for example, you are one of that melancholy horde goaded by an excess of flesh to do anything to get rid of the excess except to eat limited amounts of properly chosen foods, the druggist will be glad to sell you *Marmola*. *Marmola* is a thyroid preparation which will in some cases reduce excess fat, but the promiscuous administration of thyroid extract is an extremely dangerous procedure not to be undertaken even by physicians without great caution and close, continued observation of the patient. In many cases, not only is thyroid ineffective in reducing excess weight, but its use is followed by nervous ailments and serious impairment of bodily function. The Raladam Company, distributors of *Marmola*, have had a long history of litigation with the Federal Trade Commission because the Commission considered *Marmola* advertising unfair to *competitors*. But the courts could find no evidence of damage to competitors, and held that the Trade Commission had no right to concern itself with any question of danger to the public. The Raladam Company was permitted to continue both sale and advertising, unhampered by any control, legal or other.

If you do not want *Marmola*, the druggist can give you any of a dozen "obesity cures" of the cathartic type, comparatively harmless in themselves if known and used occasionally as cathartics, but capable of doing serious damage if used according to di-

rections—every day. *Kruschen Salts* is typical of this class of nostrums. Would you lose twenty pounds of fat in four weeks? Cultivate the habit—take *Kruschen Salts* every morning. The principal ingredient of *Kruschen Salts* is epsom salt, and, says the American Medical Association, the habit of taking such salt laxatives daily, as recommended by the *Kruschen Salts* concern, is "pernicious to a degree." If you suffer from constipation as well as obesity, *Kruschen Salts* may aggravate the constipation instead of curing it. If you do not suffer from constipation, *Kruschen Salts* may give you a chronic case of it.

Every large drug store has dozens of preparations for the relief of headaches, pains, and minor ailments of all sorts. For most people these preparations, unless taken in excess, are comparatively harmless. To a certain percentage who happen to be excessively sensitive to some ingredient, however, they are gross poisons, and the concealment of the presence of these ingredients constitutes a grave danger. The drug which probably causes an abnormal reaction more frequently than any other drug is acetylsalicylic acid—ordinary aspirin. Those who know they are abnormally sensitive to aspirin can avoid using it. But they lose this protection when the aspirin is mixed with other ingredients and given some meaningless name, for example, *Salicon*, a drug store favorite. Just how serious the results of such concealment can be is revealed by Drs. R. W. Lamson and

Roy Thomas in the July 9, 1932 issue of the *Journal of the American Medical Association:*

Mrs. C., who was painfully aware of her susceptibility to acetylsalicylic acid, carefully avoided it. She suffered from asthma, and was urged by a friend to try M. Matte's *German Asthma Powder*, which is widely used in the West. "To have a margin of safety, she took only half of the dose usually recommended. . . . In a few minutes after the powder had been ingested the symptoms became acute and one of us [Dr. Thomas] was called too late to see her alive, as she died in less than half an hour after her attempt at self-medication." Drs. Lamson and Thomas point out that there is nothing on the label of these asthma powders to indicate the presence of aspirin. (There is of course no law requiring manufacturers to notify their customers of the existence of any such hazard.)

Cinchophen is another common drug which, with its compounds, is fairly harmless to most persons, but a dangerous poison to many. Despite this, it is an undeclared constituent of rheumatism and arthritis remedies which are sold in every drug store. A summary of medical literature relating to the toxicity of this drug by Dr. Clifford R. Weiss records 37 fatalities directly attributable to cinchophen, and Dr. Weiss states that he himself observed three additional fatal cases. Of these three cases, two had taken cinchophen sold under the trade name *Atophan*, and one had taken the drug as *Farastan. Renton's Hydrocin Tablets*, another cinchophen compound, drew

the following comment from the American Medical Association in the January 17, 1931, issue of its *Journal*:

"With the increasing number of cases of acute yellow atrophy of the liver following the continued use of cinchophen it seems little less than criminal that irresponsible 'patent medicine' exploiters should continue to put this potent drug in their secret mixtures, with no warning as to the possible dangers in its continued use. Nor are the large and supposedly respectable pharmaceutical houses, which put up such formulas for 'patent medicine' manufacturers, free from moral responsibility in the matter."

Acetphenetedin and acetanilid are two common constituents of drug store headache cures which have been responsible for thousands of cases of poisoning and many deaths. The Food and Drugs Act requires that the presence of these drugs be shown on labels. It is evident, however, that naming a drug on the label is not sufficient protection when the dangerous properties of the drug are not recognized by the average person. The label should obviously include also the words "a dangerous drug" or a similar statement. *Bromo-Seltzer*, a headache remedy which is not only sold at the drug counter but is also frequently dispensed at the soda fountain, is one of the many preparations containing acetanilid. *Kohler Antidote* is one of the many preparations that contain acetphenetedin.

Many of the bottles on the drug store shelves contain no harmful ingredients, yet because they are inert or inactive where an active preparation is necessary, they must be classed with those that are directly injurious. Thus, your child may go through life with bowed legs and weak bones, because you gave him a codliver-oil preparation completely lacking in the necessary Vitamin D. In fact, most of the flood of codliver-oil preparations which came as a sequel to the growing recognition of the importance of the vitamins in diet, particularly of children, are practically worthless. These preparations are administered for the prevention or cure of rickets and other ailments, and the absence of a sufficient vitamin content is a serious matter. According to a recent Government report, 62 percent of 128 codliver-oil preparations tested were below standard. Another report on 17 brands of codliver-oil tablets showed 15 to be inert and worthless in the prevention or cure of rickets or any other condition.

The list of drug store remedies which are dangerous for the sole but valid reason that they fail to function could be extended indefinitely; more are described in the chapter on patent medicines. Let us proceed, however, to the prescription department, and there wind up our brief inspection of the druggist's shelves. The picture here should be more pleasing, for, after all, this is the part of the drug store

business for which the druggist spent two, three, or four years in professional training; it is the *raison d'être* of the drug-store, for a grocery store can sell patent medicines and poisons, and in most States, grocery stores do; prescription-filling is the vivifying spark of what remains of a profession in the otherwise commonplace business life of the druggist. The picture should be more pleasing, but it isn't. When your child is dangerously ill and you rush to the drug store to fill a prescription on which his life may depend, there is a good chance that the vital drugs will be stale and inert, and that the wrong amounts of these drugs will be used.

About 165,000,000 prescriptions are filled annually in the 60,000 drug stores of the United States. This is equivalent to about eight prescriptions per day for each drug store. Many small drug stores fill only one or two prescriptions per day. Nevertheless, they must have on hand hundreds of drugs, any of which may be called for. Some of the most vital of these drugs, such as digitalis, which is used in heart disease, and ergot, used to prevent hemorrhage in childbirth, deteriorate rapidly; yet the same stock may be used month after month, even for years, until the last dead drop is gone. Aside from drugs which are subject to deterioration, a large percentage of prescription compounds, including both those prepared by the druggist himself, and those purchased from drug houses, depart from the legal standards set in the United States Pharmacopœia and the

Formulary. The great majority of such preparations are not included in these standards and are therefore subject to no control whatever, since no legal standards of quality, method of manufacture, freshness or potency apply to non-standard drugs.

Very few States check the quality of drugs used in the compounding of prescriptions. In Connecticut and Massachusetts, where a competent but very limited check is made annually, the results are not encouraging. In the former State 30 per cent of all drugs tested in 1929 and 1930 were sub-standard or misbranded. In Massachusetts, of 143 drugs tested in 1930, twenty-nine per cent were sub-standard. The quality of drugs used in most other States is undoubtedly worse to the extent that it differs at all, for the very good reason that not even an attempt at control is made.

When we come to the final stage, the actual compounding of prescriptions, the picture is even more unsatisfactory. Nowhere, apparently, is any general periodic check made of the druggist's accuracy in filling prescriptions. On one check in the District of Columbia, of 100 prescriptions filled for inspectors of the Federal Food and Drug Administration, 67, or *two-thirds*, were filled unsatisfactorily. Unfortunately, lack of jurisdiction prevents the Federal officials from checking prescriptions outside the District of Columbia, since interstate commerce is not involved, and lack of funds prohibits their doing it in the District except in an isolated instance. As with

the drugs themselves, however, the lack of any control of the compounding of prescriptions in the various States, except possibly New Jersey, probably means that the percentage improperly filled, or filled with weak drugs, or drugs of excess potency, is even larger.

The blame for this state of affairs cannot, however, be placed on the individual druggist. The total retail cost of prescriptions filled annually in the United States is about $140,000,000, according to the Committee on Costs of Medical Care. The Committee also estimates that $20,000,000 is spent annually on *Bromo-Seltzer*. Thus seven fast-selling nostrums like *Bromo-Seltzer* would bring the druggist as much business as all his prescription-filling. The fault lies less with the druggist than with a drug and prescription dispensing system which mixes a minor profession with a major business. What is left of the professional interest must inevitably suffer.

V

DANGER IN COSMETICS

THE PATH followed by women of all times and of all countries in search of the beauty promised by magic and mysterious potions is strewn with the victims of a hundred deadly poisons. We are not, however, concerned with cosmetic history or geography. Here in the United States, of the billion dollars normally spent each year for chemical beauty aids of all types and for beauty treatments, many millions have been spent, and are today being spent, for preparations containing harmful, irritating, and dangerous poisons.

Purchasers of ordinary foods and drugs have little enough assurance of safety, despite the control (as some term it) provided by the Federal Food and Drugs Act and by various State agencies. The purchaser of cosmetics has no protection whatever. No Federal agency has jurisdiction over cold creams, depilatories, skin lotions, hair dyes, or any other substance intended for external use and not for the treatment of disease. There are no effective State cosmetic laws, for powerful lobbies supported by the drug and cosmetic manufacturers and by newspapers and magazine publishers living on dubious advertis-

ing, have defeated every effort of State legislatures to regulate the sale of cosmetics; and municipal control is in most cases spineless and ineffective, or wholly lacking.

One agency only, the Federal Trade Commission, occasionally moves against a manufacturer of harmful cosmetics. These proceedings, undertaken in a haphazard manner and frequently striking at the least blameworthy of the manufacturers, are not meant either to guard the consumer or to remove dangerous substances from the market. Their sole intent is to prevent unfair competition—between manufacturers—which ensues, the law says, when a manufacturer advertises a harmful lotion as "absolutely harmless, and safe for any skin"; for such advertising is unfair to the competitor whose equally harmful lotion is described modestly as "pleasant and soothing to the tenderest skin." This is evidently good logic to the legal mind; to the layman it is much like requesting a safebreaker to cease and desist from using nitroglycerine because it is unfair to competing cracksmen who carry only burglar's tools.

The law under which the Federal Trade Commission operates allows it to enjoin the use of the word "safe" in the advertising; but the Commission is without power to stop the *sale* of the lotion. Occasionally a timid manufacturer actually shuts up shop, and the public benefits. Usually, the injunction of the Commission serves as an exhilarating challenge to the imaginative advertising copy-writer who will

find a hundred poetic phrases meaning "safe" to the beauty-seeker, which will yet be quite out of reach of the clumsily probing fingers of the law.

The result? It is shown clearly in the pages of any cosmetic formulary. Lead and arsenic, both fatal poisons, the corrosive chemical ammoniated mercury, and a dozen irritants such as salicylic acid and carbolic acid figure prominently in the formulæ of lotions and creams. Hair dyes, the depilatories, and the bleaches are among the worst offenders.*

A few years ago a new poison, one of the most deadly known, was added to the depilatory list—thallium acetate, a well-known rat-poison, and the active ingredient of the depilatory cream, *Koremlu*. Before its new appearance in this guise, thallium had been directly responsible for more than a hundred deaths. Its use as a hair remover for certain disease conditions had long since been abandoned by the medical profession as too hazardous. Now, without warning to the public, it appeared in a cream widely sold as a "safe" depilatory.

Koremlu, Inc. of New York, boasted that its advertising was carried by the best magazines, that its product was sold by the biggest and best department

* Ordinary *cold creams*, fortunately, even those glorified and costly preparations of the Elizabeth Ardens, the Dorothy Grays, and the Helena Rubensteins, selling for one or two dollars for two or three ounces, are compounded from a few well-known simple and safe ingredients costing, say, five or ten cents. There is no need for harmful or irritating substances to permit them to perform their simple functions of encouraging massage or serving as a superficial cleanser preferred by some to soap and water.

stores throughout the country and was approved by the Department of Health of New York City, and that a test made by the associate dean of the College of Pharmacy of Columbia University found it harmless. All of these statements are true. Its advertising appeared in *Vogue* and other of the "best" magazines; but it was refused by a New York tabloid newspaper. It was sold by nearly all of the large department stores in New York City; but R. H. Macy & Co. refused to sell it. *Koremlu* was approved by the New York City Department of Health, which was willing to permit its sale in New York so long as it was labeled "for external use only" (does anyone *eat* depilatory cream?); but the San Francisco Department of Health banned it completely. And though *Koremlu* was declared harmless by the associate dean of the College of Pharmacy of Columbia University, it was considered extremely dangerous by the American Medical Association, the New York County Medical Society, and several hospitals and clinics.

When the American Medical Association first cited *Koremlu* as a dangerous preparation in its *Journal* early in 1931, the indictment was closed with this statement:

"It is hard to believe that Kora M. Lublin, who seems to be behind this product, realizes the dangerous properties of the preparation she markets. It is kinder to assume that ignorance, rather than a callous disregard for public safety, prompts the sale of Koremlu!"

The mass of evidence against *Koremlu* that has accumulated since this statement was published makes it all too clear that either the most profound ignorance, or "a callous disregard for public safety" was responsible for the continuance of its sale to women as a safe depilatory. It is clear, also, that not the manufacturer alone, but also the magazine publishers, the department store managers, and the public officials who, while aware of the case against *Koremlu*, yet continued to promote and permit its sale, have been cruelly negligent.

Let us turn again to the pages of the *Journal of the American Medical Association* to see what this "safe" depilatory did to women who adopted the "*Koremlu* Cream Method" of freeing themselves of excess hair. The issue of May 30, 1931, carries a communication from Drs. W. S. Duncan and E. H. Crosby of the Cleveland Clinic entitled "A Case of Thallium Poisoning Following the Prolonged Use of a Depilatory Cream." The following excerpts are taken from this communication:

"A white woman, aged 24, came to the Cleveland Clinic complaining of severe pains over the soles of both feet and ankles, weakness of both feet and legs, and intense burning of both feet. . . . Four and one-half months prior to entering the clinic, the patient had first noticed intermittent epigastric [abdominal] pains which gradually increased in severity to sharp, cramp-like pains throughout the entire abdomen. These pains were associated with nausea, several attacks of vomiting, loss of appetite and substernal pain. . . . As the numbness [of the toes] increased and the burning became intense and almost constant there developed an increased sensitivity of the skin. . . . During the three weeks preceding her examination at the clinic, these symptoms were so severe that the pressure of the bedclothes caused pain. Several dizzy spells were experienced and at times the vision was blurred. The patient had become very nervous, cried easily, had lost about ten pounds, and felt continually tired. . . .

". . . It was discovered that she had been using a depilatory cream, 'Koremlu,' nightly for the preceding five months, beginning its use two weeks before the appearance of the first symptoms. A quantity sufficient only to cover the upper lip and the chin had been used on each occasion."

And here is another case from the May 30, 1931 issue of the *Journal of the American Medical Association.* Dr. Jay Frank Schamberg, Philadelphia, writes:

"On April 12 I saw a young woman, seriously ill as a result of thallium poisoning. An internist friend of mine and one of my assistants has each likewise seen a case of thallium poisoning within recent months. A description of the case that I saw follows:

"A woman, aged 28, single, presented herself with loss of seven-eighths of the hair on the scalp. . . . She reported that she had been using 'Koremlu Cream' in the

axilla [armpits] to get rid of hair there. The hair in the armpits still persists. She first used the preparation in April or May of 1930 and used it every night, with some intervals of rest until October, when she had a severe nervous breakdown. Then its use was interrupted but was resumed again for two weeks in February. She gradually observed a loss of hair on the scalp. . . . There then developed pains in the legs and weakness, and likewise neuritic pains in the arms. There now exists a multiple neuritis with considerable weakness in the lower extremities."

Koremlu, the "safe" depilatory! A total of nearly twenty cases, of which the two cited are typical, have been reported in the pages of the *Journal of the American Medical Association* since February, 1931. Note, in the last case cited, "an internist friend of mine and one of my assistants has each likewise seen a case of thallium poisoning within recent months." One can only conjecture how many scores of similar cases, unreported and very likely not even diagnosed as thallium poisoning, have occurred.

A final quotation from the issue of May 30, 1931, will cast further light on the intolerable dangers of the present lack of control:

"In 1912, Sabouraud, a French authority on diseases of the . . . . scalp, devised an ointment of thallium acetate for use in the removal of superfluous hair. Since that time, accidents have been reported from its use.

"The original Sabouraud prescription called for an introduction into the ointment of *not more than one per cent of thallium acetate* [*Koremlu* contained seven per cent of thallium acetate], and Sabouraud urged that even in this dosage it should be applied *only once a day*, and that an amount of the ointment *not larger than two kernels of wheat* should be used. [Women were advised to use *Koremlu* both night and morning.] Ointments containing one per cent of thallium acetate should not be used over an extensive surface [*Koremlu* was to be used on arms, legs, and face]. (Italics ours.)

The public's last and weakest line of defense in the battle of business profits versus public welfare is the city health department.

With proper indignation, the New York County Medical Society declared through its organ, the *New York Medical Week:*

"The continued sale of Koremlu Cream, in the face of almost twenty cases of poisoning which have been reported following its use, indicates a laxity somewhere in the Health Department which should be corrected. . . . The Sanitary Code specifically forbids the sale of any cosmetic containing a poison. The Department of Health is charged with the enforcement of the Sanitary Code. Still the sale of thallium acetate under the designation of Koremlu Cream goes on. Is there any reason for the failure to enforce the law in this case?"

In New York City, as noted, the Health Commissioner is empowered by statute to forbid the sale of poisonous cosmetics. Yet, confronted with evidence that *Koremlu*, containing the deadly poison thallium

acetate, was being sold in New York City, Dr. Shirley W. Wynne, Commissioner of Health, did no more than to insist on its being labeled "for external use only," stating that his failure to ban *Koremlu* was based on "definite changes in the formula of the cream both as to its base and its metallic content and . . . the fact that there are no authoritative data as to clinical experimentation with creams of this type, under competent supervision, on file." In view of the cases cited above, one might ask whether the Commissioner must personally witness the death agonies of a victim of a product such as *Koremlu* in the Health Department's New York City laboratory before he will take action. Yet New York has perhaps one of the *best* health departments in the United States, rather than the very worst, as this typical instance might lead one to judge.

Professor Curt P. Wimmer, associate dean of the Columbia University College of Pharmacy, provides the final episode in the account of this case. In a letter dated February 21, 1931, and addressed to Koremlu, Inc., Dr. Wimmer reported the results of his investigation into the toxicity of thallium acetate, saying, in part:

"I have made an extensive study of the literature pertaining to the subject of thallium acetate . . . which fails to reveal any cases of toxicity resulting from the [external] use of ointments or creams containing the

salt. There is, moreover, no evidence that thallium acetate can . . . . cause severe toxic disturbances by absorption through the healthy skin.

"I have applied the cream to myself in gram portions for a period of ten days and have not noted any effect whatever. In view of all this I have come to the conclusion that there is no danger of toxic effects provided the cream is used on the unbroken and healthy skin."

This letter was written almost simultaneously with the appearance of the first case records of *Koremlu* in the *Journal of the American Medical Association.* A later article citing other cases reviewed the literature of thallium acetate poisoning which showed that external applications of ointments containing the salt *are toxic,* and that thallium acetate *can* penetrate the skin. Dr. Wimmer gave *Koremlu* a clean bill of health largely on the basis of his daring experiments on himself, in which he applied 1-gram portions of the cream to his skin daily for but 10 days. *Koremlu* guaranteed results only if the cream was used *daily for a year or more,* and suggested the use of *more than 4 grams daily* to remove hair from both legs below the knee. To remove hair from legs, arms, and face, many women have probably used as much as 6 grams daily.

In July, 1932, while this chapter was being written, the Koremlu Company, with $2,500,000 in damage suits against it, went into bankruptcy. There were assets of $5. At least one of the large department stores in New York City continued after the

exposé to sell *Koremlu* in disregard of its poisonous character. A former head of the Koremlu Company is now marketing another so-called depilatory cream, approved by another New York college professor.

Only two methods of hair removal are permanent in their effects, electrolysis and X-rays. While these are not exactly poisons, the dangers of their use as a substitute for certain relatively safe chemical depilatories will perhaps justify their consideration at this point. The electrolytic needle is the only permanent hair-removing agent recommended by competent dermatologists. In the hands of a skilled operator it is safe. Unfortunately, you are likely to have it used on you by a person expert enough at washing hair or exorcising wrinkles, but totally lacking in the calm and precision of spirit, hand, and eye required to grasp with fine forceps, separately and individually, each of many thousands of short, fine hairs, and to press the needle through the skin into the follicle of the hair, where a few seconds' application of the electric current kills the follicle and permanently destroys the hair growth. In the hands of the most skilled operator, the electrolytic needle leaves a tiny scar where it enters the skin; though visible, the scars are probably much less disfiguring than the excessive hair to women whose misfortune troubles them enough to give them fortitude to undergo the treatment. But the unskilled operator into whose hands you fall may leave the needle in the follicle too long, he may miss the follicle altogether, he may use too

large a needle, and in these and other ways leave permanently disfiguring pits and scars. If the hairs are very fine and close together the scarring may be serious.

Of all the crimes perpetrated upon women seeking relief from excessive hair on face or limbs, burning the hair out with X-rays in any of its numerous disguises is probably the worst. Hundreds, perhaps thousands, of young women, the victims of these treatments, will go through life with the withered and wrinkled cheeks or limbs of very old women, the flesh actually atrophied by the caustic rays. Many, during the years following the treatments, will suffer an added and greater affliction—cancer in the area treated. Unfortunately for the victims, though fortunately for the quacks who are responsible, scars, inflammation, ulcers, and the atrophy of the flesh do not ordinarily appear until several months, in some cases a year or more, after the treatments are completed. There is no cure; the damage once done cannot be undone. Dr. Harris when he was Commissioner of Health in New York City said he had seen countless cases of women whose faces had been disfigured for life with the burns received from X-ray treatment.

The X-ray quacks have paraded under many names and disguises. The "*Tricho* System" is one, the "*Marton* Method" another. The *Journal of the American Medical Association* again supplies case histories of victims of the *Tricho* System, advertised

as a safe, sure and scientific method for the removal of superfluous hair:

"B. F., female, age not given; history of 25 treatments by the Tricho system on face and a similar number of treatments on the forearms, four years ago. At the present time she shows atrophy . . . of both face and forearms.

"Miss B., age not given; history of Tricho treatments to her face, area shows atrophy . . . and ulceration at the present time."

With all the cleverness of their craft, the quacks do not offer their treatments as X-rays, which many would suspect to be dangerous except for brief exposure as in X-ray examinations of lungs or broken bones. The familiar X-ray tubes are hidden and disguised in all sorts of cabinets and boxes, from which emanate, according to the practitioners, some brand-new, special, powerful, hair-destroying rays—rays otherwise "harmless."

The *Tricho* system, let it be said as a warning to those having a weakness for fine-sounding names, was endorsed as to effectiveness and safety by the American Association for Medico-Physical Research. But this association, formerly called the American Association for Spondylotherapy, was organized, according to the American Medical Association, by Albert Abrams, the "outstanding quack of the century," and one of its chief functions is, we judge, endorsing.

Despite the abounding claims and testimonials of the advertisers, the chemicals that dissolve the hair, the abrasives that rub it off, and the waxes that jerk it out do not remove the hair permanently any more than shaving does. The brave women who wish to pull their hair out time after time can do so with perfect safety, except perhaps to their nerves, and those who have the patience to rub it off are also safe; but they must accept the fact that it is not "a jerk and it's out," like the small boy's tooth tied to the door-knob with a string,—but a frequently recurring operation.

The chemical depilatories that dissolve excessive hair are not quite so innocent. These, whether in liquid, powder, or paste form, "may be dangerous, because they depend for their action on the power of the drug to dissolve the hair," says the American Medical Association. "As the structure of the hair is practically identical with the structure of the outer skin, anything that is powerful enough to destroy one may injure the other." Used properly and only occasionally, on not too sensitive skin, they are fairly safe; but it is considered "psychologically bad," and not good business practice for the manufacturers to put warnings on labels or wrappers, with the result that the chemical—usually barium or calcium sulphide—is in many cases used too often or left on the skin too long, and "sulphide burns" ensue. *Neet* is one of the widely used depilatories of this type. There is considerable risk in the daily use of a sul-

phide depilatory such as *Snow*, which is now being advertised and sold to men as a substitute for shaving.

In the front rank of manufacturers willing to profit from the sale of poison are the makers of hair-dyes. They have collected an imposing list of poisons, lead acetate, silver nitrate, various copper salts, aniline-derivative colors, and put them into their dyes, selling millions of packages to all comers as "safe." In fact, the more dangerous the dyes are, the greater is the likelihood of their being advertised as safe. There is no need to put all available poisons into a single dye; to show both safety and sincerity, therefore, the manufacturer whose dye contains only lead acetate, proudly parades the fact that his dye contains no silver or copper.

Paraphenylendiamin, an aniline-derivative dye, was once used to turn rabbits into seals for fur coats or collars. Even the minute amount of the dye rubbed off on the skin by the collars was enough to cause many cases of severe poisoning. This did not, however, frighten the hair-dye makers; paraphenylendiamin is now the coloring agent in many widely sold hair-dyes.*

There is *Mrs. Potter's Walnut Tint Hair Stain*,

* The use of paraphenylendiamin, as well as lead, copper, chromium and cadmium in hair-dyes, is banned in Germany. In the United States there is no agency which can impose such a ban.

for example, "guaranteed free from lead, sulphur and silver." Mrs. Potter's stain was found to contain a form of paraphenylendiamin, and at one time the *Journal of the American Medical Association* reported more than 30 cases of poisoning following its use.

There is *Kolor-Bak*, boasting that it is free of nitrate of silver, paraphenylendiamin, and mercury. The Federal Trade Commission in 1930 ordered the makers of *Kolor-Bak* to *stop advertising it as safe*, since it contained (as it still does) the poisonous lead acetate. (The Commission was without power to order the makers to stop using lead acetate.)

Other hair-dyes that were found to contain poisons, are: *Domino-Tru-Tone* (lead acetate), Dr. Durand's *Acme Hair Rejuvenator* (lead acetate), *Farr's for Gray Hair* (silver salt), Goldman's *Gray Hair Color Restorer* (silver salt), *La Creole Hair Dressing* (lead acetate), *B. Paul's Liquid Mixture* (copper sulphate), *Nu-Hair* (lead salt), *Simplex Hair Coloring* (paraphenylendiamin), *Eau Sublime French Hair Coloring* (paraphenylendiamin), *Q-Ban Hair Color Restorer* (lead acetate), and *Lea's Hair Tonic* (lead salt).

The record of a hair-dye known as *Inecto Notox* shows clearly that every hair-dye must be regarded with suspicion. In sharp contrast with the usual practices of the industry, the makers of this dye conducted more or less extensive research in an ear-

nest effort to make their product effective and safe. Despite this, several cases of poisoning followed its use, and the Federal Trade Commission, after some years, enjoined the makers from advertising it as "safe."

Preparations like these, containing poisons, are doubly dangerous because the symptoms following their use are frequently of an obscure nature and so are not traced to the real cause. Both the use of the dye or cosmetic and the poisoning may thus continue for long periods. Here, for example, is a typical case cited in the June, 1932 issue of the *Bulletin of Hygiene:* "A woman . . . for nearly two years had suffered more or less continuously from gastro-intestinal disturbances with intense headaches and nervous symptoms—impairment of sensation . . . vertigo . . . weakness of legs. Investigation for some toxic element led to the incrimination of a black hair dye, Inecto."

Unlike the dyes, hair tonics and hair restorers are ordinarily as harmless as they are ineffective. There are, however, many exceptions, and the careful consumer had best beware. A few of the hair tonics that have at one time been injurious are *Lucky Tiger, Liquid Arvon, Mahdeen,* and *Wildroot Dandruff Remedy,* all of which contained arsenic.

The changing of the color of the skin involves only slightly less risk than the changing of the color of the hair. Of all preparations for the care of the skin, freckle-remover and bleaches are probably the

most consistently hazardous. Thus, *Othine,* which has already been mentioned, contains ammoniated mercury, a powerful and irritating caustic poison. Its manufacturers, following the lead of many brother captains in the cosmetic industry, describe *Othine* as "absolutely harmless to the most delicate complexion." *Stillman's Freckle Cream* is another widely advertised preparation containing ammoniated mercury.

Complete safety in cosmetics is impossible for any one as long as business men, rather than honest dermatologists (not the type you read about in advertisements), compound cosmetics; and as long as any cosmetic preparation containing any poison whatever can be put on the market and sold without public control.

The state of the cosmetic industry is accurately described by Dr. Maurice Aisen, writing in the February, 1931, issue of *Aromatics*:

"I venture to say that in spite of the colossal growth in the cosmetic industry, no practical advance in the merits of the many products has taken place, because the industry has followed the old patent-medicine mentality. This is true because the created products in the industry have been in the hands of beauticians, advertisers, pseudo-chemists and pseudo-dermatologists. This industry to insure real growth and security must be transferred to men who are strictly scientists."

Unfortunately, there is no way under the sun,

except by the power of government, to transfer the industry to scientists. If there is to be even a partial remedy for the present dangerous situation, Congress and State legislatures must refuse to continue to accept the dictation of the poisoners, and must pass at least a minimum of protective legislation. A suggestion for such legislation is presented in the final chapters.

VI

FAKE ANTISEPTICS

WHEN THE *Vestris* went down in mid-ocean a few years ago with a loss of 112 lives, newspaper headlines screamed the story of the terrible disaster; a thousand outraged editorial writers denounced the inexcusable negligence of the ship's owners in entrusting human cargo to an unsound vessel; a dozen investigators and courts of inquiry sought to place the blame and to exact punishment. Mass death, a sinking ship; truly a fine subject for headlines, editorials, official inquiries.

But when ten or a hundred times as many men, women, and children die every year of infections because of the ignorance and the avarice of the manufacturers of fake antiseptics, there are no headlines, editorials, or inquiries. There are, to be sure, glowing articles in the magazines of business describing the genius of this or that president of a drug company who last year persuaded the public that it must buy another million dollars' worth of Listroboris (if we may invent a name) to escape horrible, imaginary dangers. But the articles fail to say that "Listroboris" is practically worthless as protection against infection; that instead of killing germs, it

may actually contain living germs; that the half-million bottles of "Listroboris" sold last year may have been responsible for a hundred deaths which the use of an efficient antiseptic would have prevented. The articles never mention this easy and profitable form of homicide committed in the name of good business and with the full sanction of legal authority.

For their callous disregard for human life in the competition for dollars, for their dangerous lies and half-truths, the makers of some popular antiseptics would be classed, by a more discerning society, with the worst type of racketeers who, in *their* operations, at least risk their own hides.

The antiseptic makers risk nothing; and when they tire of the game, they can turn to some other pastime of the business world, just as a head of a leading pharmacal company, having succeeded beyond the best hopes of the company's owners in flooding the nation with an ocean of a nearly inert and almost worthless antiseptic, turned to the exciting game of selling razor blades.

When your six-year-old son falls on a dirty pavement, and you swab an antiseptic on his bleeding knee, it is your belief that the antiseptic kills germs —all the kinds of germs that may be picked up on a dirty pavement. For a long time the Federal Food and Drug Administration shared your belief to the extent of insisting that to be labeled antiseptic, a preparation must be able to kill one type of germ at

least. But lately the courts, resenting this manifestation of bureaucracy, have turned to the definition in Webster's Dictionary as more important than the purchaser's understanding of the term, and insist that the Food and Drug Administration keep its hands off any preparation labeled antiseptic even if it can't kill bacteria, provided only that it *tends* to restrain their growth. However slight its tendency to restrain, it may still be labeled antiseptic.

But suppose a preparation is labeled germicide? Then, indeed, it must be able to kill germs, but still, according to the Government's tests, one type of germ only, although it is well known that a germicide, while killing some bacteria, can leave others, equally dangerous, in apparently perfect health. It doesn't help you much if the expensive antiseptic you pour on a cut kills only typhoid germs and leaves those of lock-jaw unharmed. Furthermore, the tests are not made under conditions in any way approximating those encountered in the normal use of the germicide. Instead, the bacteria are intimately mixed and surrounded with the germicide, an impossible condition even if an infected part were to be immersed in a tubful of the stuff. In other words, the Government's tests, on which the right to label a preparation as a germicide is based, do not show whether the preparation would kill *any* bacteria under actual conditions of use.

Dr. F. J. Cullen, Chief of Drug Control of the Federal Food and Drug Administration, himself de-

scribes the worthlessness of those tests. A trade magazine, *Aromatics*, quotes him in its December, 1931, issue, as saying:

"Our test is a laboratory test. It does not tell the story of the effect of alleged antiseptic preparations on the human system. In the laboratory a preparation is subjected to a test of five minutes, with germs, in a test tube. If germs are killed in that period, the preparation may be labeled antiseptic. [This was before the court decision which would make this test applicable to germicides, permitting antiseptics to be much weaker.] In the use of a mouth wash, for example, by a person, the preparation is retained in the mouth usually only a few seconds, and is subject to dilution constantly."

In January, 1930, the Food and Drug Administration issued a pamphlet called *Fake Antiseptics and the Law*, describing the Government's campaign to purge the market of worthless antiseptics. Over a thousand preparations labeled as antiseptics were purchased and tested by the Administration to determine whether they would either kill a strain of bacteria or arrest its growth. Says the pamphlet:

"Hundreds of [unnamed] preparations tested in this manner were found utterly incapable of killing the organisms or of preventing their growth. In fact, two of the alleged antiseptics examined actually contained living organisms, organisms which had survived in the preparation from the time of its manufacture, through the channels of distribution, and were still going strong when the containers came to the government bacteriologist."

As for the manufacturers, the Food and Drug Administration found that few had even taken the trouble to test their products against bacteria. The story of fake antiseptics and the law closes with this gem of official inconsistency and misinformation:

"Constant surveillance is still being exercised over antiseptics to put down at once each new crop of fakes that continually appear about as fast as the old ones are brought into line with the law. By and large, the public of today can accept at face value the statements appearing on most packages of antiseptics that are shipped within the jurisdiction of the Federal Food and Drugs Act."

That is: despite the continually appearing fresh crop of worthless preparations, we are told to "accept at face value the statements appearing on most packages!"

Such is the dictum of the Government's experts. It is also the dictum of a number of bacteriologists employed by or associated with antiseptic manufacturers. Other bacteriologists, thinking in terms of lives and not of dollars, have reached a different verdict.

Dr. Abbott William Allen of the New York Post Graduate Medical School and Hospital, for example, tested 21 commonly used antiseptics under conditions simulating—far more closely than do the standard tests—the conditions of actual use, and found most of the common proprietary antiseptics ex-

tremely unreliable. The tests were carried out on four different kinds of germs, which were in contact with the antiseptic but not surrounded by it or thoroughly mixed with it, as in the "standard" tests. The easily killed *bacillus typhosus* was one of the test organisms. *Staphylococcus aureus*, a common contaminating and infecting organism—a pus-former—was the second test organism. The third was *bacillus pyocyaneus*, "a relatively frequent secondary invader"; and the fourth organism was *bacillus subtilis*, which does not cause disease, but which is a good test organism because it is spore-forming, and therefore more resistant to the action of antiseptics.

The object of the tests was to determine whether the antiseptics used as directed by the manufacturer would kill the bacteria after contact with them for intervals up to 15, 30, 60, and 180 minutes. Of the 21 antiseptics tested, eight were widely used preparations such as iodine, *Mercurochrome* and *Listerine*, while the rest were compounds such as dilute carbolic acid and silver nitrate, little used except by physicians.

Ranked in order of efficiency in killing the four test organisms, *Listerine*, most blatantly advertised and one of the most widely sold of antiseptics, was fifth from the bottom of the list, being rated lowest among the popular proprietary antiseptics tested. It failed to kill *bacillus pyocyaneus* and *staphylococcus aureus* in four different tests even after three hours. In one test it killed *bacillus subtilis* only after

more than 30 minutes of contact, failing to kill it in three other tests after three hours. It was fairly efficient only with the readily succumbing *bacillus typhosus*, killing this organism in less than 15 minutes in two tests, killing it in some time between 15 minutes and a half-hour in one test, and killing it after one hour in the fourth test.

Mercurochrome, in the two per cent watery solution in which it is sold to the public, was little better than *Listerine*, despite the confidence you have been taught to feel when you see the pretty red stain on your cut. It failed to kill *bacillus pyocyaneus* even after three hours, and it killed *staphylococcus aureus* in but one of four tests, and in that, only after fifteen minutes. It failed to kill *bacillus subtilis* in two tests, killing it in two others after half an hour and one hour respectively. *Bacillus typhosus* again was the only one to succumb with more or less consistency, being killed in one of the tests in less than fifteen minutes, in two tests after fifteen minutes, and in the fourth test after a half-hour.

Hexylresorcinol, like *Mercurochrome* advertised as the marvelous product of the laboratories of Johns Hopkins University, which was to revolutionize antisepsis, proved itself scarcely more efficient than *Mercurochrome*. It failed completely to kill *bacillus pyocyaneus* and *bacillus subtilis*. In four tests on *staphylococcus aureus*, it succeeded in one test in less than fifteen minutes; once after fifteen minutes; once after a half-hour; and the fourth test failed

completely even after two hours. *Bacillus typhosus* again was least resistant, less than fifteen minutes being required to kill it in two out of the four tests.

Even hydrogen peroxide, the standby of watchful mothers two decades ago, was more efficient than these three popular antiseptics, which millions, guided by misleading advertising, trustingly accept as new guardians of health and life. Well up on the list were tincture of iodine (which was inefficient only with *bacillus subtilis*), Dakin's Solution, and *Zonite*.

Further illuminating evidence on the danger you run when you rely on the claims of manufacturers of widely advertised antiseptics, particularly those used to prevent or treat infections of the nose and throat, is found in a recent article on nose and throat disinfectants by Jean Broadhurst, a bacteriologist at Columbia University. She writes:

"Recently I called upon a convalescent friend and found him having his nose and throat sprayed to check an incipient sore throat. 'I can't have another illness on top of this one,' he explained. 'But that's just what you are going to have,' I rejoined, 'unless you change your spray.' I could speak positively, because I had already read the label on the bottle from which the nurse had filled the atomizer, and was horrified to recognize a preparation we had found was loaded with spores of penicillium or blue mold. It is quite unusual to find that preparations sold as disinfectants are themselves carriers of objectionable organisms. *The difficulty more*

often encountered is that they have little or no power to kill the bacteria or molds present on the tissues to which they are applied." (Italics ours.)

But the manufacturers of these fraudulent and dangerous preparations are allowed to go on selling them to the public, which has no way of discriminating between the good and the bad!

Miss Broadhurst tested thirty commercial preparations, some of them sold by the millions of bottles or packages.

Of these thirty preparations, thirteen were found to be useless or nearly so, and *only eight* were effective germicides or antiseptics.* But all, we may be sure, are sold without interference by Government authorities.

Summarizing her study of these preparations, Miss Broadhurst states:

"Our chances of wasting our money and risking our lives by depending upon disinfectants which do not disinfect are much greater than these records indicate. Our welfare depends rather on the relative amounts of helpful and useless preparations which are sold and in

* We should like to tell the reader, who has a very vital interest in such matters, the names of the useless antiseptics, and also of the effective ones; but the article fails to supply this essential information. The reason for this lack is at once apparent to anyone familiar with the pressures and inhibitions existing in every university laboratory and in every editorial office. With the rarest exceptions, university administrations and editors are insensitive to the fact that the suppression of the end results of scientific researches on consumers' goods is strongly against the public interest. Those results, to be useful, must be stated in terms of trade names and not of abstruse chemical and mathematical symbols.

use in our homes and in our hospitals. Two of the best nasal preparations are still practically unknown, and three of the poorest nose and throat preparations are now sold in astounding quantities."

The list of antiseptics* and mouthwashes that must be considered unreliable in the light of the finds of impartial bacteriologists would be equivalent to a list of almost all of the popular proprietary preparations on the market. Some of the more widely advertised preparations which must be included in this class are in addition to *Mercurochrome*, *Hexylresorcinol*, and *Listerine*, already cited: *Borine*, *Pepsodent Antiseptic*, *Astringosol*, *Mercitan*, *Odol*, *Vapex*, *Formamint*, *Lavoris*, *Sozodont*, and *Absorbine, Jr.*

Because the skin itself is definitely self-disinfecting when it is clean, and because the body normally has great powers of resistance to most organisms, infections and diseases do not ordinarily develop from wounds, especially if the injured area is washed and kept clean. It is also true that the most efficient antiseptic known could not alone prevent or cure a large number of infections, either because the particular organisms involved are exceptionally resistant or because the seat of the infection is beyond the reach of antiseptics, the best of which have only very limited penetrating power. For these reasons it is almost impossible for an individual to

* Ignoring the court's redefining of the word on the basis of a lexicographer's medical ideas.

discover from his own experience whether an antiseptic is efficient or not; he may use an antiseptic that is no more germicidal than water year after year without discovering its worthlessness. Then when he needs an efficient antiseptic, it will fail to give him the protection he expects. For infections are common, and in a large percentage of cases which arise, good antiseptics would prevent them.

Although no figures are available for the incidence of infections among the entire population, Dr. C. O. Sappington, director of the Division of Industrial Health of the National Safety Council, gives the following figures for infections in industry, based on insurance and compensation statistics:

1. Approximately 250,000 cases of infected wounds develop annually.

2. Insurance companies pay from 40 to 60 per cent of their compensation claims for infected wounds.

3. The lost time for disability in a case of infection averages 18 weeks longer than in a non-infected case.

4. There is a total loss annually of approximately $104,000,000 from infected wounds in industry; the total loss of time involved is 4,450,000 weeks, or the equivalent of 85,000 years.

Dr. Sappington urges those in charge of industrial first aid to allow their doctors "to choose the antiseptics which are to be used in . . . dispensaries and first-aid kits, for these men understand the limi-

tations and advantages which all antiseptics possess." Perhaps the industrial physicians do understand the limitations and advantages of different antiseptics. Many general practitioners, unfortunately, are almost totally unaware of the critical literature on antiseptics and accept as readily as do their patients the pseudo-scientific and misleading claims made in the more scientific-sounding advertisements. At the present time, under a legislative and legal set-up which works almost completely in favor of the manufacturers and against the public, the advertisements for antiseptics provide the only guidance generally available to the public and to many doctors. To judge the wilfulness of this deception systematically practised on the public, one must compare a few samples of this advertising, over which there is no Government control, with the findings of competent bacteriologists. A clue to the extent of the deception practised by the antiseptic-makers is found in the April, 1931 issue of the *Journal of the American Medical Association:*

"In a recent issue of one of the women's magazines, some 12 different antiseptics were advertised to the public. Of these only one had met the standards of the Council on Pharmacy and Chemistry of the American Medical Association. The remainder were direct attempts to exploit to the public with exaggerated claims the alleged prophylactic virtues of antiseptic substances notwithstanding the fact that the claims were in every instance

exaggerated and unwarranted by any scientific evidence."

Unfortunately for the public, "good" scientific evidence can always be manufactured, and the antiseptic-makers have been among the most ingenious in their use of science, so-called, to help them defraud the public. Among the most startling claims are those put forward by the Lambert Pharmacal Company. Typical claims of the company's advertisements of *Listerine* are: "Kills 200,000,000 germs in fifteen seconds. . . . Has a penetrating power equal to three per cent solution of carbolic acid. . . . Reduces number of colds 66%. . . ."

What does the American Medical Association say of the first of these claims? This: "The argument that *Listerine* kills 200,000,000 germs in fifteen seconds means absolutely nothing. Germs are mighty small and a bathtub full of undiluted *Listerine* would no doubt kill as many germs as can be gotten into the bathtub, provided the mixture is made thoroughly." (And provided the germs are of the susceptible varieties.)

The advertisements, unfortunately, do not tell how many hundreds of millions or billions of germs *Listerine* fails to kill during the time it is killing two hundred million. Furthermore, they fail to point out that the slaughter of germs in a test tube is no sort of proof that the antiseptic would kill germs in the mouth, the tonsil crypts, the teeth and gums,

or an open wound. The comparison with carbolic acid is also meaningless, for carbolic acid *in dilutions which are safe for use on the skin* is a notoriously poor antiseptic, and we have found no evidence that it has noteworthy penetrating power.

The advertising speaks of "scientifically controlled" tests under competent medical supervision which showed that gargling *Listerine* twice a day reduced colds 66%. It is the way of true scientists to support their claims by presenting all needed test data. Dr. G. F. Reddish, chief bacteriologist of the Lambert Pharmacal Company, formerly in charge of the bacteriological work of the United States Food and Drug Administration, nevertheless refused to give needed supporting data in response to questions put by inquirers. Dr. Reddish refused to say more than that the tests were "carefully made under scientific direction." If this be true, then Dr. Reddish has a low regard for science and for humanity, in not publishing a complete scientific paper reporting what would surely have to be classed as one of the outstanding triumphs of bacteriology in human history—a long step toward the conquest of colds. As it is, the claim may be taken as one more triumph in Lambert Pharmacal Company's salesmanship.

In an analysis of the claims made for *Listerine*, the American Medical Association states:

"The supreme ridiculousness of the situation becomes apparent when it is realized that the antiseptic virtues of *Listerine* are so infinitesimal in comparison with better

antiseptics as to invalidate even modest claims made for it. . . . By its very name *Listerine* debases the fame of the great scientific investigator who first established the idea of antisepsis and whose work led to the principle of surgical sterilization and asepsis."

The advertising of *Mercurochrome* is of a totally different kind. Instead of whopping claims of tremendous germ-killing powers, there appear such modest statements as "*Mercurochrome* in 2 per cent solution is being found entirely acceptable as a general antiseptic and first aid prophylactic." Doctors are urged to try *Mercurochrome* in all fields, and it is continually being urged as a substitute for iodine. Hynson, Westcott & Dunning, Inc., of Baltimore, the makers of *Mercurochrome*, have volumes of evidence as to its excellence which they are glad to present to inquirers. Much of it looks like good evidence, too, giving every appearance of scientific validity. On the other side of the picture, however, are such findings as these: "*Mercurochrome* is of little or no value as an antiseptic against *bacillus pyocyaneus*, in the presence of pus, or other mediums suitable to its growth. . . . Iodine will effectively destroy *bacillus pyocyaneus* under like experimental conditions." (From the conclusions reached in a study made in 1927 by Irving S. Wright, M.D., of the New York Post Graduate Medical School and Hospital, who states that the study was undertaken following the observation in a neighboring hospital that *bacillus*

pyocyaneus was found, in several cases, growing in dressings of *Mercurochrome*.) The findings of Dr. Allen of the same hospital, which rated *Mercurochrome* among the poorest of 21 antiseptics tested, were mentioned earlier in this chapter. "*Mercurochrome* is a germicide incomparably weaker than is commonly supposed. Others have obtained similarly unsatisfactory results with it."—Lawrence P. Garrod, in the *British Medical Journal* of April 4, 1931. (Dr. Garrod tested several antiseptics used in obstetrics under laboratory conditions closely simulating those met with in actual practice.)

The manufacturer's reports show *Mercurochrome* to be an efficient antiseptic; other reports describe it as almost worthless. There is no complete discrepancy in the findings, for the reports in the main discuss two different germicides: the first, a solution of the product in alcohol and acetone, on which the manufacturers' claims are apparently based; the second, a solution in glycerine and water, which the public buys. There is excellent evidence that the first is an efficient antiseptic for many uses; there is a great preponderance of evidence that the second, the aqueous solution, is almost worthless for general use. Despite this, the manufacturers do not make any distinction between the two types of solutions in the advertisements; and only the second—and, we judge, almost worthless type—is available to the general public. This is a dangerous deception of the public, and a very profitable one. A possible reason for the

deception is not difficult to find: the alcohol-acetone solution of *Mercurochrome* stings or burns, and it is easier to sell a non-stinging substitute for iodine, even if the substitute has very little value.

The advertising for *Hexylresorcinol—S. T. 37*, despite the origin of this product in the laboratories of Johns Hopkins University, is closely akin to that of *Listerine*. "No existing test was fast enough to time its germ-killing power," a full-page advertisement in the *Saturday Evening Post* informs us. Drs. Allen and Wright found that *bacillus pyocyaneus*, one of the organisms which *Hexylresorcinol* was alleged to kill in less than 15 seconds, was still alive after continuous contact with full-strength *Hexylresorcinol* for *48 hours*.

A study made at the school of dentistry of the University of Pennsylvania throws further light on the unreliability of *Hexylresorcinol* in comparison with other antiseptics. This study was particularly valuable, since it was carried out under actual clinical conditions on 410 patients, and not in test tubes. A test area of each patient's mouth was painted with one of the antiseptics, which was allowed to remain for one minute, after which the tissue in the center of the test area was scraped and examined for living organisms, by means of bacterial cultures. *Hexylresorcinol* produced bacterial sterility of the tissue in only one-fifth of the tests made with it, while iodine in various solutions produced sterility in every case. It is interesting to note that *Mercurochrome*,

in the alcohol-acetone solution which is not offered to the public, was successful in sterilizing 93 per cent of the test areas on which it was used. Even plain alcohol, in solution with equal parts of water, a poor and unreliable antiseptic at the best, worked in half the cases—two and one-half times the efficiency of *Hexylresorcinol*. Since advertisements for antiseptics, upon which life may depend, are precisely like advertisements for razor blades or candy, in that they are not required to tell the whole truth or even the truth in part as scientists understand it, we do not learn these things from the advertisements for *Hexylresorcinol*, even in the professional journals read by scientists and physicians.

Antiseptics, like all other drug products, are regarded by the drug industry as just one more means to profit, and the industry's attitude toward the public is one of almost complete irresponsibility. Certainly, no real improvement in the labeling and advertising of antiseptics can be expected without Governmental regulation so stringent that it is almost beyond conceiving so long as legislatures and courts consider themselves the appointed guardians of profits above all and profits-at-any-price.

Perhaps nothing indicates the attitude of the industry itself and its faith in the courts better than the comments of one of its principal trade publications when U. S. District Judge Chestnut ruled that the Food and Drug Administration must thereafter permit preparations to be labeled "antiseptic" even

if they could not kill germs. Said *The Drug and Cosmetic Industry*, editorially: "It is a healthy sign to see the Administration reversed in one of its fanatical rulings. It is not to be expected that the department will have very many such cases if its officials know the attitude that the courts will take, and also feel sure that the manufacturers will go to court."

And now that the "fanatical" ruling of the administration has been reversed, what are we to expect of the immediate future? Let a general bulletin to the industry from Clinton Robb, counsel to the United Medicine Manufacturers of America, answer that:

> "Since almost all claims now being made for 'antiseptic' products were adopted during what may be described as the evolution of the present official ruling, when more or less uncertainty and confusion were inevitable, and as the present rule is somewhat more liberal than that once applied to this class of products, it is suggested that manufacturers may find it well worth while to recheck both their products and their claims in the light of this bulletin."

—And so come back to a solid, business-like footing.

VII

THE QUACK AND THE DEAD

OF ALL the rank flowers in the garden of rugged American individualism, few have a more vile and pervasive stench than the huge $350,000,000 patent-medicine blossom. At its best, the patent-medicine industry is guilty only of the economic fraud of selling necessary drugs under meaningless or fantastic names, with absurd claims of special merit, at from five to a thousand times their ordinary value. These drugs, with some exceptions, are injurious only to the extent that they drain from slim purses the dimes and quarters needed for bread and meat and milk.* At its worst, the patent-medicine industry is guilty of murder: murder through selling medicines containing poisons; murder through persuading the poor and ignorant to rely upon worthless nostrums for the treatment of diseases as dangerous to the individual and to the race as cancer and tuberculosis and syphilis. What are the penalties for such murder?

* Perhaps a master statistician would find that this type of fraud is more dangerous to the physical well-being of the race, the number affected being considered, than other aspects of the patent-medicine racket; we fear the problem is at the same time too fundamental and too attenuated to be successfully attacked with present facilities for social research. At any rate we must leave it to the social scientists to answer.

No penalties whatever, even when the killing can be proved. Under the Federal Food and Drugs Act, the courts, if they function at all, occasionally impose a small fine if a dangerous nostrum is *mislabeled;* they can do nothing if the nostrum kills but has no technically false statements on its label.

For example, there was *Kopp's Baby's Friend.* Between January, 1906, and February, 1907, the *Journal of the American Medical Association* reported the deaths of nine infants, most of them only a few months old, from dosage with this "King of Baby Soothers". An analysis of the nostrum made by the American Medical Association in 1905 showed that it contained a dangerous opiate, morphin sulphate. A shipment of *Kopp's Baby's Friend* and other Kopp remedies was seized by Government inspectors in 1915, a decade later. The Government charged that *Kopp's Baby's Friend* was misbranded and the Kopp's Baby's Friend Company was fined *$25 and costs.** After this farce the company was permitted not only to remain in the medicine business but to continue to sell the same deadly poison, provided that it made no false claims on the label—it could still claim anything it thought credible in its advertising—and declared the presence of the opiate, morphin sulphate.

Winslow's Soothing Syrup was another of the deadly nostrums intended to stop the baby's wailing by putting it to sleep, with morphin. Though *Win-*

* The costs in such case may run from $15 to $25.

slow's Soothing Syrup is still sold in the drug-stores, it no longer contains morphin; for the law now requires that the presence of morphin be declared on the label.

There is a pleasant fiction constantly revived by apologists for advertising: they refer to the old "patent-medicine days," and imply that dangerous "cures" belong to the past; that the Federal Food and Drugs Act came along like a strong, fresh wind and swept them all away. We forget that the Act applies only to claims printed on labels or packages and is completely impotent to prevent the sale of injurious quack medicines or to prevent the making of viciously misleading claims in newspaper, magazine, radio, handbill, drug-store almanac, or mail advertising. We are inclined to forget, also, that far too few dollars and men are available for drug supervision to permit effective control of medicine labels, supposing that the drug officials were zealous at their business—as they are not.

Even if labels were universally accurate, the absence of the claims made in advertising can by no stretch of imagination, nullify, in the mind of any ordinary purchaser, the miraculous effects and cures promised by the advertising copy-writers. The advertising, by its volume, its frequency, its cleverly worded assurances and testimonials, and the good repute of the medium in which it appears, sells the

nostrum, and a simple, modest label on the package by its very reserve seems to reënforce the position of high integrity so carefully assumed by the shrewder and more dangerous quacks.

W. G. Campbell, the chief of the Federal Food and Drug Administration, has many times supplied evidence that not only are dangerous nostrums still being sold, but that they are still being fraudulently *labeled* for use in diseases where the absence of medical attention must inevitably lead to needless deaths. On June 24, 1931, Mr. Campbell addressed to "Manufacturers of Medicinal Preparations" an official statement which should have been printed in every newspaper with suitable editorial castigation of Mr. Campbell for his naïve interpretation of his duties as the appointed protector of the public health! The statement said, in part:

"It is the purpose of the Food and Drug Administration to continue vigorously its program of action under the Federal Food and Drugs Act against medicinal preparations falsely and fraudulently represented by label or circular accompanying the package as preventives or treatments for disease conditions. Extensive surveys during the past year have shown that many products are on the market bearing label claims which their compositions do not justify. Some of the diseases for which unwarranted claims have been noted are: . . . Appendicitis, Cholera, . . . Bright's Disease, . . . Angina Pectoris, Heart Disease, . . . Blood Poison, Cancer, . . . Smallpox, Meningitis, Scarlet Fever, . . .

Diphtheria, Venereal Diseases, . . . Influenza, . . . Pneumonia, . . . Tuberculosis, Gall Stones, . . . Pernicious Anemia. . . . The responsibility under the law for compliance with its provisions rests squarely upon the manufacturer or shipper. Manufacturers whose products bear label representations for these disease conditions or for other serious maladies should carefully consider whether or not their claims are justified in the light of present scientific knowledge."

Could anyone be kinder than Mr. Campbell to the quacks and crooks who are purveying cures and treatments for Bright's disease, cancer, pneumonia, and tuberculosis? He would have them "carefully consider whether or not their claims are justified in the light of present scientific knowledge." The quacks do not need to consider, Mr. Campbell; either they know, or are too ignorant to learn or care, even if the Government law officers formally credit them with public spirit and social intelligence.

Presumably the reason why the nostrums for which these claims were made were not immediately removed from commerce was either insufficient funds (so that the Food and Drug Administration could not make widespread seizures and, with the district attorneys, prepare cases for prosecution); or more likely an unwillingness to cause what the Department considers "unnecessary business losses."

How urgent the need is for a thorough overhauling of the whole badly designed and tottering structure for the protection of the public against unsafe

medicines and drugs can be judged from the recent killing of the wealthy E. M. Byers by *Radithor*, a patent medicine containing radium, marketed by William J. A. Bailey, a man with a long record of dangerous quackery.* Bailey, an ignorant and unscrupulous charlatan, was not required by any law or agency to prove that his nostrum could be taken by human beings without serious injury, despite the fact that it contained radium, a deadly poison when used indiscriminately; and despite the public knowledge of the recent horrible deaths of women workers who swallowed small quantities of a radium salt used in painting luminous watch-dials. It is scarcely necessary to note that there was not one iota of proof that *Radithor* had even an infinitesimal value for the treatment of any one of the 160 diseases and conditions for which it was recommended.

Let the news magazine, *Time*, tell the story of what happened to Bailey's victim, Byers:

"Young in years and mentally alert, he could hardly speak. His head was swathed in bandages. He had undergone two successive operations in which his whole upper jaw, excepting two front teeth, and most of his lower jaw had been removed. All the remaining bone tissue of his body was slowly disintegrating, and holes were actually forming in his skull. Byers did not know that his case was hopeless until two weeks ago. Autopsy last week revealed that he had only six teeth left. Both jaws were rotted. His brain was abscessed. Distributed through

* See Chapter IX.

his bones, calculated Dr. Frederick Bonner Flinn of Columbia University, were 36 micrograms of radium. Ten micrograms [one three millionth of an ounce, an inconceivably small quantity] is a fatal quantity."

Food and Drug Administration officials were pathetic in their reaction to the whole matter. If there had been no radium in *Radithor*, they said, they could have prosecuted Bailey for misbranding, but since it was correctly labeled, they could do nothing. That is, Bailey was safe from prosecution so long as his nostrum was deadly but correctly labeled. But if his nostrum had been safe and mislabeled, he would have been in danger of a $25 fine or confiscation of a certain number of bottles of his poison. We can almost see the Government's notice of judgment now: "U. S. *vs.* 18 2-ounce bottles of *Radithor*."

Through long practice, Bailey had become adept in weaving out of the words and phrases of pseudoscience an impenetrable cloak to hide his frauds from all but a scientist's eye. Dignified and restrained advertisements for *Radithor* appeared in dignified and restrained publications. It was advertised to "stimulate functional activity and lowered metabolism, correct imperfect nutritional processes, eliminate toxic wastes. . . ." *Radithor* was "the outstanding achievement in the application of radioactive rays—the climax of 30 years of toil by hundreds of scientists who labored with invisible rays that the

cause of humanity might be served." It does sound impressive, doesn't it? The best newspapers were impressed—to their considerable profit.

Most nostrum-vendors mulct the poor, who often turn to the genii of the patent-medicine bottle to escape what is to them the ruinous—or impossible—cost of medical treatment for serious and chronic ailments; Bailey, selling a nostrum to be consumed in daily doses over long periods at a cost of more than a dollar per dose, stretched his net for the wealthy. And there were snared, too, many physicians, at once reputable and unscientific and gullible, who were quite willing to testify to the quite unproven usefulness of radium water in the dosing of the sick, and to use the deadly stuff in private practice.

The career of *Radithor* has now been ended; not by the food and drug officials in the interest of public welfare, however, but by the Federal Trade Commission in the interest of "fair trade." *Radithor* advertising made false and misleading claims, which was unfair to competitors and took their business away. But note that while Mr. Byers died in 1932, as far back as October, 1929, the Department of Agriculture reported the presence on the market of a flood of radium preparations and devices sold for their marvelous curative powers. There were waters, belts, pads, salves, hair tonics, tissue creams, mouthwashes, even chocolate bars. Many of these are still being sold. Most of them contain no radium in any form

and so are probably harmless. But others, like *Radithor*, actually contain radium, which can cause cancer and other diseases, even when it does not enter the body. There is no knowing how many hundreds or even thousands of lives are being endangered at the present time by these radium-bearing preparations and devices, be they ever so properly labeled.

And hundreds of thousands, and perhaps millions, are still being unwittingly dosed with a hundred or a thousand other dangerous poisons; and there is no law, except for feeble and ineffective State and municipal regulations, almost never enforced, by which the poisoners can be reached.

The presence of alcohol, narcotics, and a few other drugs is required to be declared on proprietary medicine labels under the provisions of the Federal Food and Drugs Act.* But patent medicines may —and do—contain arsenic, strychnin, or any one of countless other poisons without any notice of their presence being given to purchasers.†

* Alcohol, morphin, opium, heroin, cocain, alpha-eucain, and beta-eucain (eucain is similar to cocain), chloroform, cannabis indica (a narcotic and sedative), chloral hydrate (an hypnotic), and acetanilid are the eleven drugs whose presence must be shown.

† If so-called patent medicines were actually patented, their formulæ would at least be available at the Patent Office to anyone paying the five-cent fee for the printed patent paper. With rare exceptions, however, they are not patented, and their contents are secrets which are wisely kept from purchasers, and which, in the United States, the makers are under obligation to reveal to no one, even to Government officers. The approximate formulæ of only a small percentage are ever discovered, as analyzed at very great expense by the American Medical Association or by Government chemists in connection with fraudulent therapeutic claims.

Most of the poisons in proprietary medicines act so slowly and insidiously that the victims do not connect the ill effects with the nostrums responsible. Occasionally, however, they do their damage quickly enough to be discovered. *FC-100*, a nostrum sold as a cure for colds by the Food Chemistry Corporation of Pittsburgh, is an example. This company circularized bank presidents, pointing out to them that "several billions of dollars is the annual loss to industry through the insidious disease known as the Common Cold. . . . These vital statistics become immensely important when we say . . . we can prevent most of this loss. . . . It will cost you, or your employees . . . about thirty-five cents to cure a cold. The action is within a few hours . . . not days or weeks."

The president of the American State Bank and Trust Company of Pittsburgh was properly impressed by this business-like logic. Some *FC-100* was purchased. Within a few hours, exactly as promised, there was action, though different from that expected. Let the *Pittsburgh Press* of February 22, 1930, tell the story:

BANKERS SUFFER FROM POISONING

Four Stricken After Taking Cold Remedy; Two in Hospital

Two officers and two employees of the American State Bank and Trust Company in Grant St. today are recovering from poisoning after swallowing a remedy for a cold yesterday. Two of the victims are in the Mercy

Hospital. The others are recovering in their homes. . . . All four of the victims are reported to have suffered abdominal spasms after taking the remedy.

In accordance with good newspaper ethics, the *Pittsburgh Press* did not mention the name of the guilty nostrum. The Bureau of Investigation of the American Medical Association, however, corresponded with the physician who attended the bank officers and employees and learned the whole story. According to the physician—

"Each patient took the contents of only one tube, in a glassful of water, and shortly after became deathly sick. The symptoms were those of acute gastro-enteric character—great depression, sweating, nausea, vomiting, diarrhea, cramps, small pulse, pinched face, etc.—lasting for hours, which suggested antimonial or arsenical poisoning."

The physician's diagnosis was correct; when a tube of *FC-100* was analyzed, there was found, among other things, the equivalent of approximately one-tenth of a grain of arsenious oxide, three times the average dose prescribed in the United States Pharmacopœia for the medical use of this poison. The poisons are discovered, but the poisoners, alas, go marching on, without so much as a sharp word from any public authority.

Most vicious of all the murderous quacks who prey upon the diseased are those who "cure" cancer. Medical science is practically helpless against cancer

in its later stages; but in the earlier stages of the disease a large percentage of cases can be cured. The alternative to early treatment by surgery or by radium or X-rays in the hands of competent technologists is a slow, painful death. And it is to such a death that the cancer-cure quacks condemn far too many of the unfortunate dupes who, through ignorance or fear of surgery, become their victims.

One of the worst of the hundreds of such frauds brought to light in recent years was the Hoxide Institute, for a time known as the National Cancer Research Institute and Clinic, run by Harry M. Hoxsey, a specialist in cancer quackery. A quotation from the August 3, 1929, issue of the *Journal of the American Medical Association* will tell the story of this "cure":

"What is the Hoxide cure? Essentially the escharotic [caustic] treatment with arsenic as the base. . . . What happens, of course, can easily be imagined by physicians, but unfortunately the public has no such knowledge. In the case of some of the patients . . . the arsenic applied to the malignant tissue ate into the blood vessels and the patients bled to death. One of the leading physicians of Taylorville wrote to *The Journal* more than a year ago . . . that the first information he had concerning the Hoxsey cancer cure 'was from an undertaker who showed enthusiasm about the matter.' . . . The same physician reported a case . . . of a patient who had been treated by the Hoxsey method for a tumor of the cheek. Two days before the man died our correspondent was called in and found necrosis

not only of the soft tissues of the face but a complete destruction of the malar bone. The man died of hemorrhage. Another case that came to the attention of the same physician was one of carcinoma [cancer] of the clitoris. As the doctor stated, 'this stuff destroyed the bladder wall, the pubic bones, and caused quite a mess.' Of course it ended fatally.

"In the Hoxide Institute the history of cancer-cure quackery doubtless will repeat itself. Scores and probably hundreds of people with non-malignant or superficial growths will subject themselves to the caustic treatment. . . .

"On such cases we need waste little sympathy. In those, however, of sufferers from carcinoma who are beguiled into coming to the Hoxide Institute for treatment the story will be one of tragedy."

Could one forget the profound ignorance, the agonizing hope of so many of those suffering from dangerous diseases, there would be only amazement at the trust put in some of the "cures" which continually bob up wherever the quacks abound—for example, the *Electro-Chemical Ring*, which would cure its wearer of such conditions as Bright's disease, diabetes, epilepsy, goiter, catarrh, and cancer. In 1914, the postal authorities issued a fraud order forbidding the use of the mails to the Electro-Chemical Ring Company, which fashioned this marvelous bit of jewelry—an old wives' cure from ancient magic—out of plain iron and sold it for two dollars. Such a splendid idea was not to be downed, however,

and the *Electro-Chemical Ring* was revived in 1927. The resurrection was short-lived, for the postal authorities quickly threw the full weight of their forces into the battle against this puny but tough and resurgent little fraud. A second revival took place in 1930, and again, in February, 1931, the use of the mails was denied the company. Perhaps some day the imaginative quack who is responsible for the *Electro-Chemical Ring* will be able to persuade the druggists (or perhaps the ten-cent stores) to sell this easy cure for epilepsy and cancer; then he will be independent of the postal authorities, and will be able to go on forever, as do many of his more prominent and influential brethren.

Of the thousands of quacks who prey upon gullible sufferers from cancer, tuberculosis, diabetes, venereal diseases and other dangerous ailments, only those who are so foolish as to print absurd claims on the labels of their preparations instead of confining these claims to the advertising are in danger even of transient interference from the Federal Food and Drug Administration. The Government inspectors do sometimes seize a shipment of such a misbranded nostrum, and the Food and Drug Administration carefully and soberly considers whether the claims are justified "in the light of present scientific knowledge." With rare exceptions, the nostrum, be it sold as a cure for tuberculosis, pneumonia, anemia, or any one of a hundred other diseases, is exactly as potent as the mystic rites of little boys for curing

a wart. Upon deciding that the claims are fraudulent, the Government takes a legal step preliminary to confiscation of the seized shipment, but not against the quack. Since the quack or his representative rarely troubles to enter a defense, the court is free to order the destruction of the single shipment involved. Sometimes the quack gets his shipment back by agreeing to relabel or reprocess it; usually he changes the labeling of his nostrum to avoid the possibility of future seizures, contenting himself with some form of advertising as the vehicle for any claims he may wish to make; sometimes he doesn't bother to change the labeling, for a dollar bottle of a nostrum may have cost him only a penny or two to prepare, and the loss resulting from confiscations of a tiny proportion of his product is too trivial to worry about.

When, long afterwards, sometimes after years, the courts sustain the action of the Government in making a seizure, or in a very few cases, in assessing a small fine, a "Notice of Judgment" is printed by the Department of Agriculture. These published Notices are the Administration's sole method of protecting the public from further operations of the cheat or poisoner. Unfortunately, past, present and potential victims do not see the notices. Let us, nevertheless, dip into a few Notices issued since the beginning of 1931, to see what kind of dangerous frauds are currently being practised and, to some small degree, disturbed.

Let us take the case of U.S. *vs.* 34 Jars of *Bel-Rub*, shipped by W. E. Shuit, Inc., from Passaic, N. J., fraudulently labeled as an external and internal treatment for pneumonia and influenza. Analysis of *Bel-Rub* showed the presence of methyl salicylate, camphor, and menthol. No claimant appeared and the product was destroyed.

Another case is that of the U.S. *vs.* 5 bottles of *Dr. Myers' Pneumonia Compound*, shipped by the Myers Remedy Company, Philippi, West Virginia. The *Pneumonia Compound* was found to contain sodium salicylate, extracts of plant drugs, sugar, alcohol, and water. Said the label: "This is a preparation which I have used in pneumonia for over 30 years without losing an uncomplicated case. . . . Will break up an attack of pneumonia in from one to three days. . . . This preparation will be found of the highest value in all eruptive fevers such as measles, smallpox, etc." The Government alleged that the claims were false and fraudulent. Again no claimant appeared, and the court ordered the destruction of all the five bottles seized. (It would be interesting to know how many pneumonia victims died because they depended on Dr. Myers' *Compound*—that is, for how many deaths Dr. Myers was punished by the destruction of 5 bottles of the nostrum!)

U.S. *vs.* 10 dozen packages of *Mygrone*, the next case, is of special interest, because *Mygrone* was shipped from Philadelphia by that most reputable

drug house, John Wyeth and Bro., Inc., and because *Mygrone* was found to contain essentially amidopyrine, familiar in the proprietary *Pyramidon*, and fillers. Yet it was recommended for influenza . . . acute fevers . . . tuberculosis. As usual, no claimant appeared to contest the Government's findings that the statements were false and fraudulent, and the shipment was destroyed—all of the ten dozen packages.

Another typical fraud is *Boracetine* shipped by F. E. Barr & Co., from Chicago. Though the Government found that *Boracetine* was not antiseptic, the makers recommended it for ulcers, infections, tonsilitis; to kill the germs of typhoid, diphtheria, pneumonia. The usual ruthless confiscation of a few bottles took place in this case.

Diphtheria is one of those diseases in which the mortality rate is high unless the victims receive early medical attention, so that antitoxin can be administered as soon as diagnosis is made. Yet here is a worthless nostrum sold as a *cure* for diphtheria. It is *Kinmonth's Diphtheria and Sore Throat Remedy*, made by Dr. H. S. Kinmonth Remedy Co. of Asbury Park, N. J. Like his brother quacks, Dr. Kinmonth (if there is a Dr. Kinmonth) did not appear to contest the Government's allegations that his nostrum was falsely and fraudulently labeled, and the usual punishment was visited upon him, though in this case as much as 5¾ dozen bottles were destroyed.

The destruction of 7 cans of *D-O-D Specific No. 3*

was the only punishment suffered by the C. Nelson Smith Company of Milwaukee for foisting on the public this dangerously worthless nostrum for the cure of gangrene, cholera morbus, influenza, blood poisoning, ptomaine poisoning, and diabetes. The 7 cans contained probably less than 25 cents' worth of magnesium sulphate, sodium bicarbonate, potassium permanganate and charcoal.

If the perpetrator of the fraud is willing to take the trouble to appear in court, he can frequently avoid the destruction of a shipment. *Virginia Dare Wine Tonic* was labeled for the treatment, among other things, of pernicious anemia. The Government found that it contained alcohol to the extent of 22.58 per cent, and was thus an excellent substitute for intoxicating beverages but worthless for the treatment of so dangerous a condition as pernicious anemia. The court upheld the Government's allegations, but ordered that the shipment be released to the claimant "on payment of costs and the execution of bonds totaling $2,260,* conditioned in part that it should not be sold or otherwise disposed of contrary to law."

Probably most patent-medicine quacks don't want to kill people; the quacks have to live, and if some people are so unlucky as to die in the process of helping them to a fuller life, it is just too bad. Occasionally, however, it is impossible to avoid the feel-

* Refundable on performance by Virginia Dare of a change of labeling.

ing that an incredible unconcern about human life is added to gross ignorance and carelessness in the marketing of a nostrum. Here, for example, among the Notices of Judgment is the case of *Allen's Ulcerine Salve*. It consists, according to the Government's analysis, essentially of a lead salt—a poison, of course—and linseed oil. For what is this worthless mixture sold? For gunshot wounds, for poisoned and lacerated wounds, for bites of animals. And here again, the J. P. Allen Medicine Co. of St. Paul, Minnesota, was permitted to go unpunished except for the destruction of a few dozen bottles of its nostrum —a gesture as effective as sending out a boy with a pea-shooter to bring down a rhinoceros.

To this list must be added the McCullough Drug Company of Cincinnati, the vendors of *Dr. James P. Campbell's Safe Arsenic Complexion Wafers*. "Examination of the drug product herein described having shown that the box label, wrapper, and circular contained the statement that the article was safe and harmless, whereas it was not," said the Government's indictment, "and that the said labeling further represented that the article possessed curative and therapeutic properties which it did not, the Secretary of Agriculture reported the matter to the United States Attorney. . . ." Putting the word "safe" before "arsenic" in the name of this nostrum made the arsenic no less deadly a poison. How truly the circular stated: "It works slow but the results are sure and permanent!" The wafers contained

starch and arsenic, nothing else. They were "guaranteed absolutely safe and harmless to anybody . . . so prepared that they can be safely taken for any length of time." And here is a partial list of diseases for which this mixture of starch and arsenic was offered as a cure: cancer of the lip; malaria; chronic syphilitic affections; ulcers; ulcerated cancer of the womb; diabetes (without change of diet); snake bites; and pulmonary tuberculosis.

The Federal Food and Drug Administration can, when it considers a case serious enough, request the Department of Justice to bring action not only against shipments of quack medicines, but also against the sellers. Apparently it did not consider this case serious, for only the usual action against a shipment was taken. Loss of three dozen packages worth ten or twenty cents, of *Safe Arsenic Wafers* was the heavy price paid by the McCullough Drug Company for a most dangerous offense against the public health. Perhaps the great associations of advertisers and of drug manufacturers who oppose restrictive legislation can explain why the law should permit the McCullough Drug Company to remain in the business of making and selling medicines; we cannot.

William E. Cherry of Trenton, New Jersey, joins the ranks of quacks with *Cherry's Famous Salve* for blood poison, ulcers, pneumonia. "Why does Cherry's Salve make so many remarkable cures?" asks the circular accompanying the packages. And it answers,

"Because it draws out the poison and corruption and heals from the bottom only." Despite the further statement in the circular that "these goods are guaranteed to comply with the provisions of the Pure Food and Drugs Act," the Government and the courts found that the salve, consisting essentially of a lead salt, fatty oils and camphor, was falsely and fraudulently labeled.

Were the men who write advertising copy for these frauds less adept at making the wildest claims seem plausible, the danger to health and life would not be great; but with their pseudo-scientific phrases, their fake testimonials, their unfailing "guarantees", they have little difficulty in persuading thousands, hundreds of thousands, that here at last is the perfect remedy for whatever one has, or fears.

Reading the Cherry guarantee of compliance with the Food and Drugs Act, would not many uneducated persons lend a willing and believing ear to the enthusiastic testimonials for this nostrum? Such testimonials as indicated by the following excerpts from the circular, for example:

"Blood poison from running a splinter in her finger . . . she used [Cherry's Salve] . . . and got immediate relief and completely cured. . . . Fell in boiling clay; [Cherry's Salve] gave immediate relief and making a complete cure without leaving any scars. . . . Blood poisoning . . . refused amputation . . . used . . . [Cherry's Salve] and was completely cured. . . . The last time it was lanced, blood poison set in

. . . and had gone nearly to my elbow . . . said it would have to be amputated. . . . I was getting ready to go to the hospital when a friend asked me to try [Cherry's Salve]. . . . The first application was made about five o'clock in the afternoon, the second at nine o'clock and I went to bed and for the first time in six weeks had a good night's rest. The next morning the blood poisoning was gone. . . ."—etc.

These cases from the Department of Agriculture's Notices of Judgment would not be complete without the story of that supreme fraud, *B. & M. External Remedy*, manufactured by the F. E. Rollins Company of Boston, for the cure of a medical dictionary full of diseases, from cancer to tuberculosis. A repetition of the fraudulent claims and the testimonials for this nostrum occupies 12 closely printed pages in the October 15, 1931, issue of the Notices of Judgment. *B. & M. External Remedy* was labeled as the "only known penetrating germicide," which "passes through the skin, the tissues, the fluids, or the bones to all parts of the body except, possibly, the brain." Among the magic ingredients which gave *B. & M. External Remedy* its great potency are turpentine oil, ammonia, and eggs. The Government's bacteriological examination showed that despite the Rollins Company's claim that the preparation was 125 times as strong as carbolic acid (and carbolic acid is a notoriously weak germicide!), it actually possessed only one-fifth the strength of carbolic acid (an overstatement of 62,000 per cent, about typical of the

scientific accuracy of a patent-medicine maker). This finding is as much as to say that not only would it not kill germs by penetration, but that probably it would not kill most germs on the topmost surface of the skin.

Such trifles do not matter to the medical quacks. To them there is only one question. It is not "will it cure?" but "will it sell?"; and to the advertising copy-writers who prepare their labels and booklets, likewise, the question is not, "what will this preparation do that I can claim for it?" but, "what claims can I make that will deceive the largest possible host of hypochondriacs, ailing, diseased and dying into buying this stuff?"

Witness a few of the claims * and testimonials for *B. & M. External Remedy:*

"A two per cent solution kills all tested disease-producing bacteria. . . . The penetrating germicide for tuberculosis, pneumonia, laryngitis, bronchitis, pleurisy, influenza, la grippe, asthma, coughs, colds, catarrh, rheumatism, lumbago, neuritis, neuralgia, locomotor ataxia, blood poisoning . . . bites of poisonous insects. . . . It is even carried through the blood stream without material loss of germicidal efficiency. . . . The scabs and exudates incident to the chemical action contain liquefied germs and their neutralized poisons which come out through the skin by osmotic pressure. . . . By careful, exhaustive chemical tests,

* This pseudo-scientific lingo is credited to the pen of Dr. H. D. Pease of the Pease Laboratories, who charged $15,000 for writing such dangerous nonsense and "giving it a scientific background."

confirmed by animal experimentation, the chemist has found that B. & M., properly used, destroys the *pneumococcus*, the pneumonia-producing germ of any type. We have not heard of a fatal termination when B. & M. was properly used even as a last resort. . . . In our clinic, two advanced pneumonia cases, the one having a temperature of 103.6 and the other of 104.2 degrees, were treated by applications of B. & M. every two hours. One hour after the second application the temperature of each had fallen one degree. After six applications and twelve hours after the first, the temperature of each was normal. . . . A doctor was called to a seven-weeks-old baby who had double pneumonia; . . . used B. & M.; speedy and complete recovery followed."

On the use of B. & M. in tuberculosis:

"One of the most astonishing discoveries during the clinical research work is that the destroyed lung tissue is replaced by a new growth of tissue. . . . If B. & M. is properly used at the first attack [of rheumatic fever] the infection will be destroyed before the valves [of the heart] are injured. If used after the fourth attack, which would otherwise be fatal, we should hope that the scar tissue would be dissolved and the valves restored to practically normal action.

"Some skin cancers treated with *B. & M.* entirely disappeared. A young woman suffering from cancer of the breast had the breast removed. About six weeks after . . . bunches appeared in the other breast which the surgeon strongly advised should be immediately removed. In about four weeks [of the use of *B. & M.*]

the bunches had entirely disappeared. Three years later there had been no indication of further trouble."

The booklet accompanying the *B. & M.* package shows clearly the quack's dangerous disregard for human life. It goes as far as to urge the use of *B. & M.* instead of sanatorium treatment of tuberculosis.

When one reads the impossible claims made for some of the worst of the nostrums, such as the *B. & M. Remedy*, there is often less of indignation against the guilty quacks than of contempt for the ignorant, credulous dupes who can be so devoid of common sense as to believe the claims and buy the stuff. But it is not really they who merit contempt, for aligned against them are not only the quacks—but also many of our most respectable institutions, and the extraordinary safeguards thrown about business operations by our legal system to prevent interference with "private initiative" and "freedom of contract." Let us rather reserve our contempt for those who exploit the credulity upon which the quacks feed, for the miracle-mongers in the clergy, for the doctors who, to disguise their ignorance, build up to the their own advantage a naïve public faith in useless pills and potions, for the business institutions with their agencies of propaganda which thrive on credulity, carefully developed and nurtured in every stratum of society, for the men with imposing scientific degrees and titles who sell their titles and degrees to be used as stuffing for a shoddy caricature of science and truth.

It costs money to be sick, to go to doctors, to specialists and hospitals; it costs more money than most people have or can spare. A poor woman worrying herself to death, fearing that the small lump she has discovered on her breast is cancer, knows that if she goes to the doctor it will mean visits to high-priced, mysterious, and uncommunicative specialists, costing a year's income, and the end not only of a life's savings but also of a life's hopes for children whose health and education depend on those savings. How easy it is at such a time for her to believe the advertisement (is she not taught on Bruce Barton's sacred word that advertising is essentially honest and in the public interest?) for a positive cancer cure—only seventy-five cents a bottle, and it can be used at home—one teaspoon morning and evening in a half-glass of water. And how easy and cheap it is to buy the magic bottle! Or it may be tuberculosis, or diabetes, or perhaps a venereal disease of which the victim is ashamed and which he would like to cure secretly with that stuff he read about in the advertisement, or his druggist told him of. To buy the bottle is so easy, and, at first, so cheap. And they buy —to the extent of about $350,000,000 annually, enough for three or four bottles of some deadly or dangerously inert mess for every man, woman, and child in the United States.

VIII

THREE DRUGS AND THE LAW

ERGOT

FOR AN extra profit of half a cent, American drug manufacturers have helped dig the graves of thousands of women dead of hemorrhage in childbirth. Half a cent per dose is the difference in cost between a medicine made from good ergot, which in many cases will control the hemorrhage sometimes following delivery and save the mother's life, and that from wormy, moldy ergot, which renders far slighter her chance for recovery. But the manufacturers have chosen to use the wormy, moldy ergot, and save the half-cent.

Although this is in direct violation of the official United States standard for ergot, the manufacturers of the extract have carried on their practices with the aid and encouragement of the Federal Food and Drug Administration. From February to June in 1930 the Administration's illegal acts in permitting certain manufacturers to recondition wormy ergot, and its laxity in the general enforcement of the food and drug laws were described and defended before a Senate investigating committee. The Administration

was exonerated by Dr. Royal S. Copeland, a senator who was not a member of the committee, and who was referred to during the investigation as "counsel" for the Administration. This exoneration was so worded and so timed as to appear to the public as exoneration by the investigating committee—which it was not. The committee, for some unknown reason, rendered no report. Let us, nevertheless, briefly review a few facts that stand out significantly from the two-thousand-page record of the hearings.

It was charged that American drug manufacturers were using dangerously contaminated raw ergot, in a manner forbidden by the official standards; that many of the medicinal preparations of ergot on the market were practically impotent, and others poisonous; and that the administration was illegally endangering the lives of millions of women by permitting favored manufacturers to recondition wormy and moldy ergot without technical supervision.

What defense did the Administration set up against these grave charges? Ergot, the administration claimed, was not an important drug; it was rapidly disappearing from American medical practice; and the best obstetricians no longer used it. A grossly false defense, with the importation of the drug increasing from 160,000 pounds in 1925 to 300,000 in 1929—surely an indication that the drug was far from obsolete! The testimony of one of the foremost American obstetricians that ergot had a most important place in his practice, and in the prac-

tice of physicians generally, further undermined the Administration's defense. This obstetrician stated, also, that his experience indicated beyond question the dangerously low quality of the drug available for physicians' use.

To the final charge that favored manufacturers were permitted to recondition faulty ergot, the Administration considered the necessities of business an adequate defense.

The Food and Drug officials crowned the testimony on the adequacy of their drug control by proving or rather pretending to prove that samples of the finest extract of ergot obtainable were inert. This ergot was part of the supply used in a Newark, New Jersey, hospital by one of the leading medical witnesses for the accusers, whom the officials sought to discredit by proving the worthlessness of his own drug supply; not realizing perhaps, that in doing so they were damning their own control of the drug: his supply, having been shipped in interstate commerce, had been within their jurisdiction.

Evidence to show that good extract cannot be made from bad ergot was presented in abundance, yet the officials countenanced a thriving business in de-bugging, de-worming, de-egging and de-molding ergot. This practice was especially dangerous, because the testing of the finished product is a slow, costly, and uncertain process.

But the manufacturers had to save their half-cent per dose. They were honest manufacturers of fine

reputation. What if the Administration's own experts did find that out of 79 commercial fluid extracts examined, only one-fifth were up to standard; that of 21 commercial ergot "specialties" the majority were practically inert, and only one of satisfactory strength? What if the lives of mothers were endangered? The Food and Drug Administration cannot spend the money to supervise these "honest" manufacturers too carefully. Money must be saved so that another bureau of the Department of Agriculture can publish a booklet on curtains for the home, and another Federal department one on advice to prospective mothers—including no advice on the avoidance of risks of childbirth due to impure drugs.

ETHER

In more than 300 American hospitals, at the present moment, the lives of patients undergoing operations are being endangered by impure, sub-standard ether. We base this figure on the boast of the Federal Food and Drug Administration that *only* 5 per cent of the tested samples of ether now entering interstate commerce are sub-standard. When at a crucial hour in your life, you are wheeled into a hospital operating room for a major operation, accept the Administration's consolation that only five out of a hundred patients are put out of consciousness with dangerously impure ether.

Next to its toleration of sub-standard ergot, we know of no more inexcusable and intolerable abuse

of public confidence than the negligence and callousness that have characterized the Administration's handling of the problem of impure ether sold to hospitals for anesthetic use. In 1926 the Food and Drug Administration made the first considerable study of the ether on the market, and found 162 out of 470 cans—*34 per cent*—below standard; that is, adulterated and dangerously impure. In the next year 25 per cent of the samples examined were bad. The campaign so tardily begun resulted in a reduction of the defective ether to nine per cent in 1929. In 1929, the Administration began to confiscate bad ether, for the reason, said Mr. W. G. Campbell, Chief of the Food and Drug Administration, "that there has been brought about that general improvement in the quality of ether that there is no longer any need to treat it otherwise than in the conventional way." In other words, when the average quality of a medicine or drug is improved, the department proceeds by prosecution and confiscation. When the quality is so bad that 35 per cent is dangerous to use, the Administration negotiates with the manufacturers in the hope that *they* will deal with the situation. All such negotiations were, according to the Administration's own statement, treated as a private matter between the Administration and the several manufacturers, and no announcement of any sort was made to the public concerning the dangers of the situation, or of the adjustments and concessions that were being made

with manufacturers to avoid prosecutions likely to cause business losses.

Although the quality of ether had for years been intolerably bad, there were no seizures of this drug from 1926 to August, 1929. There could be no need for seizures under the Administration policies; its spokesman, Mr. Campbell, said that ether was made by "responsible manufacturing concerns, who, in my judgment, could entertain no motive other than that of the production of articles of the highest purity, and certainly articles that would be used for such important purposes as anæsthesia. . . ."

The Army evidently felt that a more straightforward and less sentimental relationship with manufacturers obtained better results, for in the years 1923-1925 it rejected, because of the presence of prohibited impurities 50,000* out of 70,000 cans* delivered on the contract of one manufacturer and, we believe, the best American manufacturer of ether.

As in the case of fluid extract of ergot, the Administration's final line of defense was, as testified by one of its witnesses before the Senate investigation committee, that ether below the Government standard was probably harmless anyway. The average hospital patient, whose risks at the time of a major operation are quite enough without his having to assume the added and unnecessary risk of impure ether, will re-

* This figure, supported by records, was placed before a Senate Committee of inquiry. The manufacturer's representative denied the validity of this particular figure, but his evidence was vague and unconvincing.

sent the implication that he should act as a hospital-bed basis of test for a product bad enough for rejection by the Army, and below the official standards of the United States Pharmacopœia, even though in the opinion of the Government's representatives, such ether is not bad enough to necessitate assured, prompt, and positive removal from the market, and prompt and firm measures to prevent the further distribution of supplies of the same character.

The casual way in which the extreme hazard of the operating table is dealt with by the Federal authorities can be shown clearly in another illustration. More than a carload (amounting to 140,000 quarter-pound cans) of deteriorated ether—in storage for years and far below the prescribed quality—was sold to one Sidney Cohen trading as the Pacific Chemical Company. This residue of wartime stock purchased for surgical use by the Army fifteen years before lay in Government storage until 1926, at which time the whole lot was condemned by the Army and offered for sale at auction, under bond, with the proviso that it should not be used or resold for use as an anesthetic, but only for technical purposes. Twenty-nine thousand of these cans, bought at *7 cents* a can, labeled "the best that can be made . . . superior in vital respects to the ether of the U. S. Pharmacopœia" were sold at *70 cents* a can to hospitals for anæsthetic purposes, over a period of three years, from 1926 to 1929. The remainder was finally confiscated, and in December, 1931, Mr. Cohen was fined $200. He is

now—six years after the offense—under indictment, with others, for conspiracy. Over two years ago, the chief of the Food and Drug Administration confessed, in testifying before a Senate committee, that he did not even know the name of the firm which had violated the ridiculously inadequate bond of $3,700 supposed to insure proper re-use of the product, nor did he know what was the result of the proceedings finally instituted against the lot.

It is significant that the Army permits approximately half as much deviation from absolute purity as is permitted by the Government standard, the U. S. Pharmacopœia, owing, it was alleged, to the peculiar circumstances of Army use, where the material must be sent great distances and into severe climates. But no one could deny that any ether sold by any pharmaceutical manufacturer, anywhere, and for normal use, may be subject to precisely the same hazards of unknown use as characterize the Army supply.

Manufacturers and the Food and Drug Administration, seeking every possible defense for their evident negligence, stressed greatly the manufacturers' explanation that ether deteriorates in the cans after manufacture. (This leaves unexplained the remarkable decrease in percentage of bad ether in succeeding years.) They did not account for the fact that a good deal of the ether was rejected for defects of a type which were clearly independent of conditions or length of time of storage, however diligently one

might seek to excuse the trouble. The finding of acidity and residues in defective ether was a clear indication that the ether was faulty in manufacture, and it should have been proceeded against, under any theory of administration, as an impure or adulterated drug shipped in interstate commerce, and clearly not complying with the official standard of quality established for such drugs.

The following condensed record of Notices of Judgment showing successful prosecutions will demonstrate the prevalence of the dangerous adulteration of anæsthetic ether and the very great extent to which nearly all leading manufacturers produced and shipped an impure product. During the period of September, 1929 to April, 1931, over 5,000 one-quarter to one-pound cans of ether were seized from shipments of the following companies and condemned to be destroyed or forfeited to the Government: J. T. Baker Chemical Co., Ohio Chemical & Manufacturing Co., Mallinckrodt Chemical Works, Merck & Co., American Solvents & Chemical Co., Milton Elias Company and Brewer Co. In many cases the ether was found to contain defects * which could not be excused on the dubious grounds of "unavoidable deterioration in the can", offered by the Government as the sole justification for its lenient policy of not enforcing the Food and Drugs Act in ether cases.

As a basis for a rough judgment of the probable

* Excess residue, or excess acidity, or non-volatile matter.

quality of ether on the market, consider the fact that the rather superior ether of a well known manufacturer was bad enough to be rejected in great quantities by the Army, which used standards of tests higher (but certainly not unreasonably so) than the Food and Drug Administration considers adequate to safeguard the general public.

JAMAICA GINGER

The recent "ginger jake" epidemic illustrates how great are the potential hazards that underlie the Government's failure to provide any reasonable degree of technical control over our food and drug supply. Fluid extract of ginger is an article used normally to a moderate extent in medicine. The official reference books recommend it for dyspepsia and flatulent colic. Of late, it has also been used as a substitute for alcoholic beverages. This diversion to non-medical use gave the Food and Drug Administration its cue for disavowing responsibility for control over the quality of the product without regard for the use, legitimate or illegitimate, to which the extract might ultimately be put. The responsibility for the safeguarding of the supply was turned over, in 1924, to the Prohibition unit on the theory that their more rigid laws and regulations and larger number of inspectors with false whiskers, axes, and brass knuckles would permit better control of the product than was possible under the weaker food and drug statutes. Indeed, the Food and Drug Adminis-

tration, in a Senate investigation, admitted that the total of its small force and funds would be entirely inadequate for the proper control of this one commonly adulterated drug.

Early in 1930, Jamaica ginger of a deadly poisonous character, causing partial or total paralysis of the person taking it, appeared in the drug stores and was consumed extensively in the West, South, and Southwest. Some 15,000 to 20,000 persons, including twenty old veterans in a soldiers' home, were seriously injured, and many died. The economic loss involved was estimated at 50 million dollars (or, roughly, fifty times the annual cost of operating the Federal Food and Drug Administration, and many times the annual operating cost of all the State food and drug administrations.) In Mississippi alone, 8,000 cases were reported (mainly among the Negroes and the poor white people) from some unknown but very deadly adulterant in the product. There were, according to estimates, 500 victims of "ginger jake" paralysis in one city, Wichita, Kansas, and 1,100 cases in the whole notoriously "dry" State of Kansas; about 1,000 cases each in Kentucky and Louisiana, 300 to 400 in Georgia, 800 in Tennessee, 1,500 to 2,000 in Oklahoma, with 600 in Oklahoma City. Cincinnati had over 300 cases, one hospital being filled to capacity with "ginger jake" victims. As early as February, 1930, a single hamlet in southern Alabama, 25 miles from the nearest railroad, with a population of 100, had several inhabi-

tants afflicted with this paralysis. Even Massachusetts, Rhode Island, and Connecticut had several hundred cases.

The poisonous adulteration in the Jamaica ginger brought about alarming disabilities involving degeneration and paralysis of the muscles, paralysis of the hands and feet, and involvement of the arteries and the brain. The poison frequently caused loss of control over the fingers so that the victim could not so much as wind a watch, strike a match, or tie his shoes. Later the calves of his legs were affected, and he walked, if at all, on crutches. Nine to sixteen months were required to bring about sufficient recovery of the victim so that he could walk.

As one commentator said, well-to-do people in Kansas found no difficulty in buying bootleg liquor in case lots, but those who could not afford the $12 and had about them but fifty cents or a dollar for drinks, got into the habit of buying at the drug store a two-ounce bottle of ginger extract, which they would hand over to the soda clerk to be mixed with some sweet fountain syrup. At first, "jake" paralysis was a poor man's disease; but later the insurance companies found cause for alarm when it was discovered that prosperous citizens who had imbibed ginger jake—lawyers, physicians, druggists, dentists, real estate brokers—were starting to collect substantial sums on sickness or accident policies.

The helplessness of the public under the business-like activities of drug manufacturers and dealers,

even with the ordinary publicity given to such a spectacular hazard as the ginger jake poisoning, is illustrated by the fact that cases appeared in Massachusetts as late as December, 1930, ten or eleven months after the first alarm over the poisoning. And even in 1931, 150 new cases appeared in California!

As we have noted, the Food and Drug Administration regarded it as entirely impossible to control this single product properly, even were they to devote their entire staff and funds to a policing of the wholesale and retail market. We think they are quite right in that estimate of the size, energy, and resourcefulness of their regulatory and technical force. Nevertheless, instead of proceeding effectively to the extent to which they could with existing facilities, or asking for special funds from Congress to help save lives and reduce the terrible suffering and economic losses of the "jake" epidemic, the Food and Drug Administration coolly left the matter, for the most part, to the Prohibition unit of the Treasury Department. The Administration did not even trouble to call the attention of Congress to the gaping hole in the flimsy wall of protection afforded by the Food and Drugs Act, which permitted the deadly, adulterated ginger to be shipped in interstate commerce disguised as "liquid medicine". Under this labeling it was impossible for the Department to seize it, or in any way stop its movement. Upon delivery across a State line it could be bottled in flasks and small vials and marketed through the retail drug store, to lay low

its hundreds and thousands of victims. Distribution in this way was carried on without the slightest danger of interference by Federal—or any other—authority.

Some of the extract was, of course, consumed by people who used it as a medicine, and it is fairly obvious that under no conception of the Food and Drug Administration's duty, either in law or ethics, could it rightly sacrifice the medicine-imbibing minority to the beverage-imbibing majority, who drank the product as a substitute for liquor. For the illness and possible death of the latter group the drug officials had no sympathy or interest. Indeed the record shows that after the matter had become most critical and cried for immediate and drastic remedies, action was delayed for months. An excerpt from the Senate hearings, on this point:

SENATOR WHEELER: There was only one thing you could do under the law and should do, and that was to seize that product.

MR. CAMPBELL: And we did, promptly.

SENATOR WHEELER: You did, promptly—*two or three months afterwards.* (Italics ours.)

Although the outbreak of paralysis began in the spring of 1930, it was not until the middle of September that the cause was determined (not by the Food and Drug Administration but by the U. S. Public Health Service). This proved to be an adulterating substance called tri-orthocresyl phosphate;

and a single drink of ginger jake, though containing only about two parts in a hundred of the substance, was sufficient to bring about, after about ten days' time, the appalling sequence of symptoms and disability already described. The venomous tri-ortho-cresyl phosphate was cheap, and readily obtained in any quantities without arousing suspicion, since it was already in common use in the manufacture of varnishes, shellacs, and similar preparations. No one has yet paid with a jail penalty or a fine for his ignorant or ruthless part in endangering the life and health of thousands by supplying the poisonous adulterant and only three firms have been fined under the Food and Drugs Act: to the extent of $50, $50, and $150. A safe law to violate, surely! For deaths and an epidemic of paralysis, and millions of dollars of loss, a $50 fine, or the confiscation of one keg of near-ginger-extract!

IX

THE MEDICINE-MAKERS

Anyone faced with the problem of selecting a physician in an unfamiliar city or neighborhood is in a quandary. He can be fairly certain that the doctor he chooses will be a graduate of a medical school, but with this his assurance of competence ends. The man to whom he finally goes, perhaps for the sole reason that his office is in the next block, may in the first place have studied medicine only because he thought there was a good living to be had in it; he may have been passed through his medical courses because he was a good fellow; he may be completely unaware of the constantly changing concepts of medical science, recorded in a great stream of intricate literature; in fact, he may believe that all progress in medicine ceased the moment he got his degree, and that the small fund of knowledge which he seems to find adequate for all cases and conditions is all that any doctor needs, or any patient has a right to. That he may be temperamentally unsuited to the practice of the difficult science and art of medicine does not matter. He is "in the business" for life. If he is like many physicians, those who come to him are not patients: they are customers, and the

old rule, *caveat emptor*, holds here just as with the merchant of clothing or shoes. But the person who goes to an unknown physician in an emergency has this comfort, at least: the man will probably be a graduate of a medical school, subject to certain standards and control; the medical man must know *something*.

But what of the manufacturers and vendors of proprietary medicines, who are not required to pursue studies even of the grammar school grade, or to demonstrate their competence in any way whatever; who are permitted to prescribe for thousands and hundreds of thousands with the product of their uncontrolled and uninspected factories; who "diagnose" in advance and treat with complete assurance almost every disease that has ever afflicted human beings? What are the qualifications of these men who take the place of the physician in millions of homes? There is a small measure of safety when we entrust our health to an unknown physician. Is there any safeguard at all when we entrust our health to *any* maker of secret remedies—so-called patent medicines? The answer, fortunately, is available in the reports of the Bureau of Investigation of the American Medical Association and in occasional Government reports. Although the American Medical Association, in accord with strict medical "ethics," has not seen fit to expose in any forthright manner the incompetence of physicians, except for those engaged in obvious quackery, its Bureau of Investigation,

under the able direction of Dr. Arthur J. Cramp, has long turned a penetrating light on the lives and activities of the medicine manufacturers.

The portrait of William J. A. Bailey occupies a prominent place in the Bureau's gallery of quacks. What was the career of Bailey before he conceived *Radithor*, the radium-bearing water which recently killed the wealthy manufacturer, E. M. Byers, and what were Bailey's activities after that time?

Bailey was in the automobile business before he "discovered" radium. Working under the imposing name "Carnegie Engineering Corporation," with an abandoned sawmill and a single box of tools as his factory, he sent circulars to various parts of the world, soliciting orders for a new automobile to be sold for $600. A deposit of $50 was required with advance orders. Giving the public to believe that the Carnegie Engineering Corporation was connected with the Carnegie Steel Company, Bailey actually obtained about 1500 orders. On May 8, 1915, the *New York Times* reported Bailey's arrest following an investigation of his activities by Federal authorities. He was sentenced in the United States Court in New York on December 14, 1915. Bailey had another experience with the courts in January, 1927, when he pleaded guilty to the illegal practice of medicine in New Jersey.

A few years ago, he appeared in the Bureau of Investigation's records as president of the Associated Radium Chemists, Inc., of New York City, selling a

line of patent medicines, including *Dax* for coughs, *Linarium*, an alleged radium liniment, and *Clax* for influenza. The company's chief product, however, was *Arium*, widely advertised as "radium in tablets". Several shipments of *Arium*—which Bailey carelessly mislabeled, instead of confining his misrepresentations to the advertising—were seized by the Department of Agriculture, which found the claims false and fraudulent.

Another Bailey nostrum was *Thorone*, put out by the Thorone Company in New York City, and described as being 250 times more active than radium. *Thorone* was recommended especially for sexual impotence, but in addition it was "indicated in all glandular, metabolism and faulty chemistry conditions."

Bailey's next enterprise was the American Endocrine Laboratories, also of New York City, and its *Radiendocrinator*. With this, he reached his stride. He had learned, first, that there are plenty of gullible prospects among the rich, and second, that to appeal to all of the gullible ones he need only claim a "cure" for all diseases and conditions. Accordingly, we find the *Radiendocrinator* selling for a thousand dollars, and recommended for everything from acidosis to diabetes, from pimples to poor memory. The *Radiendocrinator* purported to be a source of gamma rays which would "ionize the endocrine glands" (needless to say, a phrase without scientific meaning).

Then came the supreme masterpiece, *Radithor*, the

story of which has already been told. In January, 1932, the Federal Trade Commission ordered Bailey to stop representing *Radithor* as harmless, and also to stop representing it as a cure for the 160 conditions and symptoms listed in the advertising.

By the time Byers died, Bailey had already passed on from *Radithor* to another nostrum, *Bioray*, and to another company, the Bioray Company, this time with headquarters in East Orange, New Jersey. *Bioray* was another fake, this time a gadget supposed to give off a continuous flow of gamma rays. The *Bioray* fraud was quickly succeeded by the *Thoronator* and the Thoronator Company of 617 Central Avenue, East Orange, New Jersey. The *Thoronator* was a slight departure from the previous Bailey inventions. This one was a "Health Spring for Every Home and Office." The *Thoronator* was a small vial holding about two ounces of water, inside which was a cylinder supposed to give off emanations of thoron. The purchaser was told to fill the vial with tap water and drink it as frequently as he wished. The tap water was "miraculously and instantly" transformed "into genuine radioactive water as rich in vital rays as some of the most famous health springs of the world."

By March, 1932, Bailey had become the guiding spirit of still another outfit, the Adrenoray Company, marketing the *Adrenoray*, which was advertised as a radioactive belt, consisting of five discs each containing "a measured amount of genuine radium from which is emitted constantly a definite

volume of mild, penetrating, stimulating gamma rays." The belt was to be worn with the discs over the adrenal glands, which would then be "ionized by a continuous biopositive radiation." If the discs actually contained even infinitesimally small amounts of radium, Bailey will probably have several more deaths to his credit before many years have passed.

This is the Bureau's final estimate of Bailey:

"It is evident that Bailey is essentially a promoter and has found, to his profit and to the public's detriment, that he can get away with a great deal more in the quack medical field than he could in the quack automotive field. This, doubtless, is because juries more frequently convict those who sell fake industrial stocks than those who sell worthless or dangerous products for the alleged cure of human ailments. In law, human life is still one of civilization's cheapest commodities." [This curious blindness of the law on dangerous drugs and poisons has been noted frequently in this book.]

We see no conceivable excuse for permitting a man with Bailey's ignorance of medicine and disregard for human life to continue his career of selling medicines or medical devices of any kind to the public.

Let us turn next, in the "rogues' gallery" of the Bureau of Investigation, to the portrait of J. White, head of "The White Laboratories, Manufacturing Chemists," of Chicago. White, with an audacity which could have sprung only from profound ignorance,

circularized municipal health officials in the West and Middle West with *Scar-Pox*, guaranteed to cure scarlet fever or smallpox in three days. A pint bottle of *Scar-pox*, selling for $15, was found, on analysis, to consist of nothing more potent than a half-cent's worth of commercial cream of tartar in water. This is the stuff that was to be used, not as a preventive, but "only when either disease, scarlet fever or smallpox, is actually contracted." It was to be relied upon even in the patient's last agony, for, said the directions, if the smallpox sufferer was unconscious or helpless, "forced drinking is advisable."

An investigator for the American Medical Association, going to the address of the White Laboratories at 309 South LaSalle Street, Chicago, located White with difficulty in the office occupied jointly by the "All Trades Employment Bureau" and the "Chicago Garage Owners' Exchange." Asked where the "Laboratories" were located, White stated that they were at his home. Was White willing to give information about his product? No. What was the source of the formula for *Scar-Pox?* A German. (Even in the ultra-smart magazines it's often a German who makes the mysterious chemical discoveries—a doubtful compliment to German science.) Had *Scar-Pox* been tested in the United States? Oh, yes; on three cases in California and one case in Chicago. But apparently not by physicians.

"One of the most astounding features of modern civilization [sums up the Bureau of Investigation] is

the fact, daily verified, that any person, however ignorant of medicine or pharmacy, can put up the most fantastically worthless mixtures and sell them as cures for some of the most serious diseases known, and there is no legal machinery for stopping it—unless the exploiter is so crude as to violate either the national Food and Drugs Act or the postal laws against fraud!"

W. H. Paxton of Birmingham, Alabama, learned all he knew about drugs and medicines as a servant in the house of a Dr. Hunt. (This is, it must be admitted, a medical education far beyond that of the average quack.) He quickly discovered that "good hot blood" would eliminate poison and any disease from the human body, and under such names as "American Cross Chemical Company" and "American Cross Bearers," he sold medicines, in later years at the rate of 24,000 bottles annually, to develop "good hot blood." This business went on from 1907 to 1929. In 1921, Paxton was investigated by the Department of Agriculture, which had begun its enforcement activities about 14 years before, or just about the time Paxton opened his thriving trade. Paxton's principal blood heaters were *Pax 2 New Life Savers, Compound Syrup of Fruit Juices,* and *Pax 3 in 1 Healing Antiseptic and Liniment,* which he claimed would cure cancer, gonorrhea, and many other diseases. Paxton's cures were declared fraudulent, and his companies were denied the use of the mails in July, 1929, 22 years late. Doubtless, a little matter of a postal fraud order will not interfere with

his $75,000 business; he is probably carrying on the sale of the same or similar nostrums under some other name at the present moment.

Another typical case reported by the Bureau of Investigation is that of Matthew Richartz and *Eksip,* his cure for diabetes. The fraudulent and dangerous character of this particular piece of quackery was described in the *Journal of the American Medical Association* in 1922, and again in 1926. The business was carried on through the mails; yet it was not stopped by the Post Office Department or the Food and Drug Administration until February, 1931. *Eksip* consisted essentially of magnesium carbonate, ordinary talc, and starch, a worthless mixture which would have been harmless, had not Richartz advertised that *Eksip* made dieting unnecessary—that diabetics taking *Eksip* could eat anything. There can be little doubt that this dangerous advice sent many diabetics to an untimely death, for over $90,000 worth of the nostrum was sold in 1928. (How many so died, it is the business of no one in America to know or to care.)

Here is the history of Richartz and his *Eksip* as revealed by the investigations of the Post Office Department. Richartz, born in Germany, received only four or five years' schooling. From 1886 to 1895 he was a barber, first in Holland and later in England. Arriving in New York in 1895, he became business agent for a barbers' union. *Eksip* was created in 1921 from the formula of "Dr. Stein-Callenfels, . . .

noted European specialist who, after a lifelong study, amazed other European specialists with his famous discovery." But there never was a Dr. Stein-Callenfels.

Like practically all quacks, Richartz used testimonials extensively. In 1929, he was using this testimonial of J. C. Meyers of Charleston, South Carolina: "I am a living advertisement for *Eksip*, . . . for if it had not been for *Eksip* and God's blessing, I would have been in my grave today." But alas, in 1929 J. C. Meyers *was* in his grave. He had died five years before of diabetes, the disease which *Eksip* "cured". Richartz produced one living testimonial at the postal hearings, Lewis L. Smith, a diabetic who testified that such were the benefits of *Eksip*, he "didn't bother about diet any more." Three days after he testified, with the hearings still in progress, Smith died—likewise of diabetes. The Bureau of Investigation deplores the fact that "in order to prove the fraudulence of this business it was necessary for the Government to do a vast amount of investigating [the transcript of the testimony in the hearings occupies 1284 pages], consume a large amount of public time and money, call on medical and pharmacological experts, and in other ways treat this whole matter as though it were a controversial scientific question. All this is necessary under our legal conception that a man is assumed to be innocent until he is proven guilty." Still more deplorable, and at the root of the whole expensive and

ridiculous proceedings of Federal law enforcement, is the fact that a man with Richartz's background should ever have been permitted to engage in such a business, and that now, found guilty of dangerous fraud, he should be privileged to return to the sale of medicines simply by changing the name of his company and his nostrum—creating a new job for the post-office inspectors and the law officers.

What qualifications had Gaylord Wilshire—exploiting a fake electromagnetic cure-all, the *I-ON-A-CO*—that enabled him so confidently to offer this cure for dangerous diseases destined frequently to end in death if proper treatment were postponed while his remedy was being tried? Wilshire's own advertising tells the whole story. He was a successful realtor; he "reads the latest books"; he looks like Bernard Shaw; he is a ". . . gold-miner, friend and companion of great authors, artists, luminaries of the drama and stage in Europe and America, and now . . . inventor of a magnetic appliance that is banishing pain and suffering from thousands of his fellow men, not to mention causing a veritable revolution in the whole field of therapy." Let no one be so foolish as to ask what his medical or physiological training was. Such trifles can not matter in a man who knows and looks like Bernard Shaw.

Another magnetic fraud was investigated by the Federal Trade Commission in the interests of fair trade. What the Commission learned about the promoters of this fraud is, however, decidedly of interest

to consumers. The *Vit-O-Net* blanket, sold from coast to coast by the Vit-O-Net Corporation and advertised in *Physical Culture Magazine* and in scores of newspapers for the treatment of dozens of diseases, started life as an ordinary electric heating pad. Then, W. F. Craddick, who originated the blanket, was told by an electrician that the current in the wires developed a magnetic field. Here, indeed, was the germ of a great idea. From that germ sprang the radio-electromagnetic blanket, price $105, and curing—when all else fails—pneumonia, Bright's disease, diabetes, and a long list of other diseases of all types and variations. Naturally, no experiments were necessary to prove the marvelous properties of this astounding discovery. For are not these marvelous properties self-evident from Faraday's Law? Witness the booklet, "Awake the Greater Health Within You," sent to prospective customers:

"Under Faraday's Law, just as wire loops in the dynamo pick up electric current, so the blood stream, moving through the magnetic field, becomes charged with tiny, minute currents of electricity. . . . The cells become 'hungry' for new nourishment, which is taken up eagerly; naturally each cell becomes sound and well. When all the cells in an organ or in a muscle are well, the organ or muscle is well; when all the organs and tissues are well, the body is well."

Craddick's idea grew into a company with distributors in thirty-five cities, and with 278 agents.

About 3,300 blankets were sold in 1928. As the company grew, Craddick's colleagues apparently thought it well to have a doctor in the firm; so Craddick promptly got a "degree" from the College of Drugless Physicians in Indianapolis. Ordinarily such a degree costs $250, but Craddick, with the advantage of an eighth-grade education, achieved his doctorate after two weeks' enrollment in return for a promise to send "students" to the college.

If consumers could look into the sales manuals used by companies of the "high-pressure" selling type to instruct their salesmen, they would be saved many of the dollars crowbarred out of them; in fact, a large volume devoted exclusively to excerpts from sales manuals would probably become the most important document in the scanty literature of consumer education. The Federal Trade Commission has done a valuable service in illuminating its findings with excerpts from the sales manual of the Vit-O-Net Corporation. We can quote here but briefly:

"If the prospect insists on consulting a doctor before buying, the salesman is to say:

" 'That's all right. You see him. If he is a progressive, up-to-date doctor who knows modern practice, he will be enthusiastic over it. If he is behind the times, and doesn't know about it, and if he says it's no good or it won't do anything for you, will you do me just this one favor? After you've come out of his office, will you stand perfectly still for a moment, shut your eyes and ask yourself this: 'Well, how about myself? Is my

health any better? Has he cured me? Has he promised to cure me? He doesn't want anyone but himself to try to cure me and get the pay for it? But where will I be a month from now if I don't try *Vit-O-Net?* Will the doctor do any more in the next month than he has in the past months, and why need I expect any more? *Vit-O-Net's* health division says it will work with me without cost. Since I see no hope ahead otherwise, why wouldn't it be good sense to use *Vit-O-Net?*'

"If the doctor tells the prospect the truth about the blanket, that it is a fake and dangerous in many cases, the salesman is to say:

" 'Thirteen thousand persons have used *Vit-O-Net* and have gained permanent, vigorous health with it. Men are found unconscious, dying, *Vit-O-Net* restored them. Do you think they believe it is a fake? Others are bedridden and are given up by their physicians as beyond cure. *Vit-O-Net* gets them up so they can walk. Do these people think it is a fake? Has the doctor used *Vit-O-Net?* Has he actually seen it used? Is it a fake only because he doesn't get any fee out of it when people cure themselves with its use? *Vit-O-Net* has as high a scientific standing as any doctor living —a higher standing than many. You don't suppose he is jealous of its ability to cure people whom he cannot help, do you?' "

Whereas most of the electromagnetic cure-alls are in themselves harmless, the Commission found that the use of the *Vit-O-Net,* a heating device, would be dangerous to health and life in certain diseases and conditions. On July 7, 1930, the Federal Trade

Commission ordered the Vit-O-Net Corporation to cease and desist from its fraudulent advertising and representations of the *Vit-O-Net* blanket.

But such genius is not to be downed. Perhaps by this time some paper-hanger has told Craddick that wall-paper is made of cellulose which, in another form, is taken for constipation; and who knows but that *Dr.* Craddick is now selling Consti-Pape: affixed to your bedroom walls with Consti-Paste, it will forever free you and your family from constipation, the root of all diseases, including pneumonia, tuberculosis, scarlet fever, and dandruff (and housemaid's knee?).

It is a far cry from the Vit-O-Net Corporation to those reputable drug houses which advertise regularly in the medical journals and persistently describe their virtue to an admiring world. We are sure that none of these respectable organizations will ever advertise a marvelous magnetic cure-all in *Physical Culture Magazine.* Yet we find that they are all sisters under the skin; all have one dominating objective, profits; and the business and science of the most reputable are measured with the yardstick of financial expediency. They, too, have their excursions into quackery, but they leave off a half-step before the quackery becomes so obvious as to jeopardize those profits which can accrue only to *reputable* drug houses.

We can find no fault with the knowledge possessed by these firms. They can hire, and frequently do

hire, some of the ablest technologists in their fields. But the technologists must stick to their lasts, always remembering that in the presence of the sales manager, a *good* scientist speaks only when he is spoken to. We do not charge these firms with lack of knowledge; but because in a general way they have that knowledge, we must assume that they are wilfully and knowingly guilty, or that they have failed to exercise the technical and managerial control the public has a right to expect of them.

Thus we find the great Parke, Davis & Company selling *Bronchial Lozenges*, under claims which they admitted were false when a shipment was seized by the Government for mislabeling; of selling *Laxative Cold and Grippe Tablets* under what the Government found were false claims of curative and therapeutic effects, failing at the same time to declare the presence (as required by law) of acetanilid, a drug which has caused numerous deaths.

Few drug houses have a better reputation than Sharp & Dohme of Philadelphia and Baltimore. Having successfully marketed an antiseptic of extremely questionable merit, *Hexylresorcinol—S. T. 37*, the company decided to capitalize its success further by marketing a *Hexylresorcinol* dentifrice known as *S. T. 37 Toothpaste*. "It cannot irritate the most delicate mouth tissue," declared their advertisements, which made the most of the firm's reputation. "*S. T. 37* toothpaste is a product of Sharp & Dohme. Here is a name that you know. The symbol of a

manufacturer whose work and reputation you recognize."

How true were the claims for this particular piece of quackery? Read the following from a review in the July, 1932, issue of the *Bulletin of Hygiene:*

"This is an account of six cases of inflammation of the lips and . . . mucous membrane, all occurring shortly after the commencement of the use of a new toothpaste known as *S.T.37*. . . . The physical signs in all cases were those of a severe, acute inflammation. . . ."

Do you remember that J. White, the foolish little quack who had a cure for scarlet fever and smallpox, refused to give any help to the American Medical Association's investigator? Read further in the *Bulletin of Hygiene's* account, and draw your own conclusions about the point of view of the manufacturers of *S. T. 37* toothpaste:

"The investigators state that they wished to carry out control experiments with all the other ingredients in the tooth paste [tests of the *S.T.37* liquid itself showed that it was a possible cause of the irritation] but that their request to the manufacturers to cooperate was refused."

Such, from worst to best, are the men and organizations providing medicines and medical devices for a hundred million people. They are required to have no degrees in medicine, bacteriology or pharmacology; no pharmaceutical, scientific, or any other

type of education or training; with perhaps the rarest of exceptions, the reputable firms with education and training at their disposal can and do disregard these resources at will; there are absolutely no legal checks which a quack cannot evade by taking out papers as a corporation, or if that fails, by a simple change of name and a new corporation. They can maim or even kill, through either ignorance or carelessness or plain profit-making, and always find a fresh supply of pliant victims.

X

LITTLE WHITE LIES?

Are you seeking the world's foremost authorities and writers on the common ailments that beset mankind; on such homely things as colds and constipation and pimples; on such serious diseases as influenza and cancer? Do not go to the famous universities and clinics; the professors of medicine and bacteriology know very little. Go instead to the advertising agencies; there you will find the men who know all. The more common a disease is, the less the old fogies in the medical schools know about its treatment, the more certain the great laboratories of the agencies are to have mastered it, to have compounded at one stroke (after years of research with a dictionary and a book of synonyms) a preventive and a cure.

It need hardly be said that these great laboratories exist only in the minds of the gifted copy-writers, although there are thousands of photographs to prove their existence; photographs of shining test tubes and retorts, of Great Scientists (usually German or French, and bearded), and of microscopes—beautiful, new, polished microscopes—the standard symbol of advertising agency research. The Great Scientists write no learned papers on the wonderful discoveries

being advertised, issue no reports for discussion and controversy. All their knowledge is distilled for public consumption through the mind of the advertisement writer.

Having created a fountain-head of medical, biological, dietary, and cosmetic knowledge, the copy-writer stands equipped to replace the graduate doctor of medicine as the family physician of today. This new family physician enters your home constantly; his words come to you from the pages of the magazine and newspaper, over the radio, through the mail. Have you a sniffle or an itch? There, on the page before you are Dr. Copy-Writer's diagnosis of your ailment and his precise instructions for treatment.

A pain? Take two tablets of *Bayer's Aspirin.* Tired, run-down? Take three cakes of yeast. Constipated? Eat *Kellogg's Bran.* Fat? Swallow a half-spoonful of *Kruschen Salts* every day. A bad cold? Smell *Vapex.* Germ-worried? Gargle with *Pepsodent Antiseptic.*

To practise as a doctor of medicine, you must devote six or seven years to getting a medical education. To dispense drugs, you must attend a pharmacy school for from two to four years—you are even then not permitted to diagnose or to prescribe. But as an advertising copy-writer you may diagnose and prescribe for all known diseases and conditions, without benefit of even ten minutes of medical education, without having read a single medical textbook.

Perhaps this is not quite fair. A copy-writer beginning work on a medicine or food account frequently does read a book; sometimes two or three books. But he reads them in a peculiar way, as perhaps no other person reads. He searches for diseases and bacteria with Greek and Latin names with which to impress prospective buyers of the particular brand of salvation he is prescribing; for disease conditions to add to the list of things he can guarantee to cure.

We find an example in the genesis of the fame of "mucin plaques" or "film." Claude C. Hopkins, one of the most renowned of advertising writers, was given the task of putting over *Pepsodent* toothpaste. In his book, "My Life in Advertising," he tells how it was done:

> "I read book after book by dental authorities concerning the theory upon which *Pepsodent* was based. It was very dry reading. But in the middle of one book I found a reference to those mucin plaques on the teeth which I afterward called 'film'. That discovery gave me an appealing idea: I resolved to advertise the tooth paste as a creator of beauty; as a weapon with which to deal with that cloudy film."

Apparently Mr. Hopkins was not even aware of those sections of the books which warned of the danger of using coarse abrasives—such as that in *Pepsodent*—in a dentifrice. He was looking for magic words, and he found them. Other geniuses found or invented halitosis, intestinal flora (known nicely as

"i. f."), cachexia, bromidrosis, comedones, and *tinea trycophyton*, the germ that "made" *Absorbine, Jr.*, in its great advertising campaign on athletes' foot.

With a laboratory in his mind and a medical dictionary in his hand, the copy-writer is ideally equipped to help the medicine and food manufacturers hoodwink and poison the public. Knowing nothing, but willing and able to build anything out of a few borrowed phrases and faked photographs, he can assume with ease the rôle of family physician, dermatologist, gastro-intestinal authority, or dietitian.

Almost *no* advertising intended to influence the general public is honest in the sense that a decent scientist understands honesty. What an advertiser says may be in a narrow sense true, but he does not tell the whole truth. Thus, *Air-Way* advertises in *Good Housekeeping:* "No policeman can protect you from these dangers! . . . Hemolytic streptococci . . . cause erysipelas, scarlet fever, broncho-pneumonia. . . . Millions of germs were found in a thimbleful of cleaner-bag dirt. . . . *Air-Way* . . . enables her to dispose of dirt and germs without emptying a bag or container." But the advertisement fails to say that the *Air-Way* picks up a great deal less dirt than other vacuum cleaners, so that additional billions of germs are left lying around where the children play. Ordinarily, failure to tell the whole truth—the advertiser calls it avoidance of negative appeals—presents only an economic hazard

or loss, of the sort which we are not concerned with in this book. In the advertising of medicines and of some foods, however, such avoidance of negative statements and implications is definitely dangerous to the consumer. For example, the *Pebeco* toothpaste advertisements tell of its costly ingredient, which is supposed to do some vaguely wonderful things to the mouth. But it fails to say that this costly ingredient, potassium chlorate (there is about a cent's worth in each tube), is a dangerous poison; that great care should be exercised not to swallow any of it; that on that account the tube should not be left within reach of children or others who should not be trusted with poisons.

Perhaps a quotation from one of the very few comparatively honest advertising statements we have read anywhere, appearing on a carton, will show more clearly what other advertisers nearly always omit:

> "*Phenolax* may be resorted to when the bowels fail to move . . . and for this occasional use it is the ideal laxative. But it must be remembered that continuous use of any cathartic . . . may lead to chronic constipation. . . . As soon as you can maintain a daily habit without the use of *Phenolax*, stop taking it. . . . If you are unable to maintain a habit without the daily use of *Phenolax*, then it is desirable to consult a physician."

This is almost unique—probably not more than

three or four such heresies have been committed in the whole history of American drug advertising. To the average advertising agency head or copy-writer, negative statements are crimes that threaten the foundations of our business and advertising world. Yet, if the public interest is to be served, such "crimes" must be committed, *normally* and as a matter of course.

It is true that the "reputable" agencies which print their advertising in the *Saturday Evening Post* and in the other magazines of business promotion will not handle the most arrant and implausible frauds—cancer and tuberculosis cures, for example; but a less transparent fraud, no matter how dangerous, is quite acceptable to them provided it is sponsored by a large enough and important enough manufacturer, especially if he can support his statements by the seeming evidence of a pseudo-scientist or two—and almost any pseudo-scientist will do.

The same may be said of publications in which advertising is carried. Twenty or twenty-five years ago, almost any magazine or newspaper would accept almost any advertisement. Today the majority of magazines of national circulation and most newspapers will not accept some of the worst types of medicine advertising; but they still gladly accept advertising which is both fraudulent and dangerous, if not too obviously so. For the worst types of advertising, printed publications have been to a large

extent succeeded by the radio, a medium where anything goes, and by personal salesmanship.

Advertising is well known to be the mainstay of sales of fraudulent and dangerous drugs and adulterated and substitute foods. If the use of important advertising media were denied to the sellers of such drugs and foods, they would soon go out of existence, or at least be confined to a small market. In an important sense, therefore, radio station managers and publishers of popular magazines and of newspapers are more to be blamed than the advertising agencies for the continuance year after year of innumerable frauds. The advertising agencies can truthfully say that their refusal to handle an account will only mean that the account will be taken to some other less fastidious agency; if no agency will take it, the seller will write his own advertising or create a new agency. But when a magazine or a newspaper or a radio station refuses to accept an advertisement, the advertiser cannot reach the special audience of the publication or station and, with unimportant exceptions, the advertiser cannot hope to set up a new newspaper or magazine or radio station to reach the audience otherwise denied him.

Furthermore, the agency is hired by the advertiser to sell goods. It receives no pay from the public, and it is intended to make a profit, not to perform a public service. If an agency were to try to carry into practice the provisions of any of the codes of ethics periodically adopted by the advertising associations,

it would soon lose all its clients and go out of business. The newspaper or magazine has a different relationship to the public. Part of its pay (though often a very small part, say 15 per cent) comes from the public. If it is a publication of repute, it may use its reputation to convince the public of the trustworthiness of its advertising columns. Practically all newspapers and many magazines boast at every opportunity that they are dedicated to the public service, to maintain a free forum for democratic institutions. Ethically, their primary responsibility should be to the public, not to the advertiser. As to radio advertising, the average radio station is in a difficult and anomalous position. All of its income comes from advertisers, but the law states that it must be dedicated to the public service, and it is the Government grant of use of the public domain in the ether which makes its operation possible.

But ethics or no ethics, responsibility or no responsibility, the agency, the newspaper, the magazine, and the radio station, all depend upon the advertiser for their bread and butter, and to expect them either to censor or to reject advertising wholesale is to expect the impossible. In a business-motivated society, it is only when they claim to exercise rigid censorship and do not, that there is cause to feel cheated, for then there is a double imposition on the long-suffering public. On the whole, the advertising agencies and the publishers bear a relationship to the public which is normal in our society. It

is precisely the same relationship as that occupied by the grocer, the department store owner, the street-corner peddler, and the "gyp" auctioneer—to sell a service or commodity in such a way as to earn the largest profit or return.

While the profit motive continues to dominate all manufacture and distribution, the exploitation of the consumer through various degrees of misrepresentation must be taken for granted; economic fraud can be controlled perhaps slightly better than it now is, but it cannot possibly be wiped out. Where misrepresentation makes not only for fraud for profit but also for poison for profit, and we are the victims of the poisoners, the effort to wipe it out must be made, in spite of—and, if need be, squarely against—the trend of business enterprise.

Within the confines of this brief chapter there is not space to examine closely all of the many types of advertising media—newspapers, magazines, car cards, radio, mail, window display, and so on. The ordinary home magazine probably represents the average—neither the worst nor the best.

Let us, therefore, turn to the pages of a few popular magazines to see what types of dangerous foods, drugs, and cosmetics are currently being pressed upon the consumer. We open a copy of the *Delineator* for June, 1932, starting at the back of the magazine where the advertisements are thickest. On one of the last pages is a half-column devoted to *Salicon*. "Pain —Lumbago, Rheumatism, Neuralgia—Quick Relief

with a Harmless Tablet. . . . *Salicon* is safe to take. Does not affect the heart, nor upset the stomach." Before 1929, these same statements appeared on the label of *Salicon*, where they gained the attention of the Federal Food and Drug Administration, which seized a shipment of the tablets and, in an action which was upheld in the courts, declared the statements on the label false and misleading. *Salicon* is not safe without important qualification, but since the Food and Drug Administration has no jurisdiction over advertising, the claims once made on the label are now made in the advertising.

Immediately below the *Salicon* story is a picture of a terribly freckled young woman who is going to remove her freckles secretly and quickly with *Stillman's Freckle Cream*. The American Medical Association found in this cream a large percentage of ammoniated mercury, a dangerous and irritating corrosive substance.

We turn a page to find a picture of a lovely, happy, young woman whose cheeks were once sallow, her eyes dull; who, as you may have guessed, suffered from constipation. Then, every night, she took *Dr. Edwards Olive Tablets*—a pure vegetable compound, non-habit-forming. The tablets do contain a vegetable compound, aloe, but it *is* habit-forming, as all cathartics are, and to take it nightly is a decidedly hazardous performance likely to lead to a chronic and unmanageable constipation.

Several pages farther on we come to the scientific-

sounding story of *Ambrosia*, the pore-deep cleanser. The New Hampshire Department of Health (apparently a very rare exception to the usual hopelessly ineffective State control agencies) warned against the use of *Ambrosia* because it contained a strong skin irritant, carbolic acid.

Across the page the Kellogg Company tells women how to reduce properly, how to avoid faulty elimination, sallow complexion, eyes which have lost their gaiety, headaches, loss of appetite and energy. According to SCIENCE, they should eat two tablespoonfuls of *Kellogg's All-Bran* daily. But bran is extremely injurious to many women (and men and children), as someone in the Kellogg Company or its advertising agency must know since they all but admit the hazard in advertisements appearing in magazines read by physicians and dietitians.

We come next to a full-page advertisement urging in the nice agency language the use of *Lysol* as a vaginal douche. There is a touch of SCIENCE and the usual testimonial from a woman physician—a foreign physician, also as usual. *Lysol* is a good disinfectant for floors and walls and toilets, and, perhaps, other uses, but it is far and away too irritating for the intimate "feminine hygiene" for which it is recommended.

Here, on page 42, is our old stand-by, the bearded scientist, a Frenchman this time, extolling the virtues of yeast. In an occasional case, yeast is helpful; in most cases for which it is urged, it serves only to

delay proper treatment, and in some cases it may cause undesirable intestinal distention. Samples of compressed yeast were found not long ago to be contaminated with *streptococcus viridans*, a relatively harmless germ, but one which is not by any means to be swallowed with impunity.

On another page we are told of the virtues of *Ex-Lax*, a delicious, chocolated laxative which is not habit-forming. *Ex-Lax*, in common with all other laxatives of its type, *is* habit-forming, and it is not, as the advertisement intimates, the best way to get rid of constipation. The American Medical Association in August, 1932, reported the death in La Crescente, California, of a healthy ten-year-old boy who ate a box of *Ex-Lax* as candy. It is bad for children for the very reason that it is in the form of a candy, since laxatives are harmful especially for children, who should not be encouraged to depend upon them.

The *Delineator* is typical of the many magazines which appeal to women. Similar advertisements appear in *McCall's* for July, 1932; in fact, it carries most of the advertisements noted above and many others worthy of mention. Here, for example, is a full-page advertisement of *Pepsodent* toothpaste—"*safe*, absolutely safe." *Pepsodent*, unless its abrasive has again been changed very recently, is not safe for tooth enamel, and its constant use twice a day, as the advertisement advises, may lead to the wearing away of the tooth enamel and to years of dentists'

bills. Another full page tells a hypochondriac world about *Pepsodent Antiseptic*. "The amazing results of *Pepsodent Antiseptic* in fighting sore throat colds [whatever a sore throat cold is] proves its effectiveness in checking Bad Breath (Halitosis)." Apparently the underlying theory here is that since *Pepsodent Antiseptic* is, so far as any one knows, worthless in the prevention or treatment of either sore throat or colds, it must be good for halitosis. The advertiser has the audacity to recommend it also for minor cuts. Since minor cuts sometimes lead to infections which an efficient first-aid antiseptic like tincture of iodine would prevent, the *Pepsodent* makers are guilty of a dangerous imposition in offering such a weak antiseptic for this purpose.

Do you want a "saline rejuvenation"? The Bristol-Myers Company tells you how to get it, in the advertising pages of *McCall's*. Keep internally clean with *Sal Hepatica*, that hoary old cure-all cathartic which has bolstered the advertising income of periodicals for so many years, though its capacity for damage was exposed by the American Medical Association more than twenty years ago. The original indictment handed down by the Association still holds:

> "The abuse of saline cathartics by the public is an evil deserving of serious attention. Rightly or wrongly, the laity fear constipation, and naturally take what they are taught to believe is the cheapest and simplest course for its relief, self-drugging by means of saline cathartics. . . . This habit is responsible for much of

the distressing spastic constipation that exists, and its accompanying neurasthenia. The advertisement and sale to the laity of such a nostrum as '*Sal Hepatica*' can only increase these evil results. . . ."

Hearst's International Cosmopolitan for August, 1932, tells you to use *Kohler Antidote for Headache*, which contains the drug acetphenetedin. Says the advertisement, "Ask Grandma's Advice About Headache." But, unfortunately, Grandma, not being expert in drug therapy, will not know that acetphenetedin has been responsible for many deaths. "At last a safe and effective way to reduce," says a *Kruschen Salts* advertisement. But, as with all alleged reducing medicines which depend upon cathartic action, the constant use of *Kruschen Salts*, taken without competent medical advice, may lead to intestinal irritation, chronic constipation, and in some cases even more serious results.

The chief fault to be found with *Listerine* is its extreme feebleness as an antiseptic. But here is an advertisement for *Listerine* as a deodorizer which urges the use of the stuff for bad breath because "it attacks the cause, then removes the effect." Only in extremely rare cases can a mouth wash be effective against the cause of bad breath, and to neglect the basic cause of continual bad breath while using *Listerine* is exceedingly unwise. *Farr's for Gray Hair* is one of the long list of hair-dyes containing poisonous substances. This one, the advertisement for which *Hearst's* magazine is content to carry, is one of the

worst, since it contains a poisonous and corrosive silver salt.

"Truth is stranger than fiction," announces Macfadden's *True Story* magazine, but there is fiction to be found in its advertising pages. In the September, 1932, issue are most of the above frauds and nostrums and a sprinkling of advertisements for: *Listerine, Fleischmann's Yeast, Pepsodent Toothpaste*, and *Pepsodent Antiseptic, Sal Hepatica, Ex-Lax, Kellogg's All-Bran, Yeast Foam Tablets, Salicon, Mary T. Goldman's* hair dye, *Lydia E. Pinkham's Vegetable Compound* (dangerous in that it is a relatively worthless preparation the use of which may delay competent treatment), *Kruschen Salts*, and *Farr's for Gray Hair*.

One might expect the advertising in *Good Housekeeping Magazine* to be quite perfect. Does not the Good Housekeeping Institute, with its white-coated chemists and other experts (see page 6 of each issue of *Good Housekeeping*), keep watch over its pages to prevent their contamination by any misleading or injurious statements? Alas, the good watch-dog now and again shuts his eyes. Thus, we find in the August, 1932, issue advertisements for *Pepsodent, Listerine, Ambrosia*, and *Kellogg's Pep Bran Flakes*.

The American Medical Association has been frequently quoted in these pages. The reports of its Bureau of Investigation are an invaluable source of information useful to the harassed consumer, though unfortunately there is no publication of wide circula-

tion through which this information can filter down to the mass of consumers. The articles, reports, and abstracts published in the Association's weekly *Journal* likewise provide a valuable and reliable cross-section of medical knowledge and opinion. In its text, the *Journal* is, in fact, as near perfection as a professional magazine can be. When, however, we come to the advertising carried in the Association's publications, we leave the domain of science and enter that of business. Those in charge of the publication's advertising policy are primarily business men who understand thoroughly the business necessities of periodical publishing. We say this with full knowledge that the *Journal's* advertising is far better than that of any other magazine used as an advertising medium by food and drug manufacturers. But it would be misleading to apply the same standards to this magazine as to any other, since its advertising is accepted as absolutely trustworthy, by a hundred thousand physicians.

Two recent examples from the *Journal of the American Medical Association* will show how unreliable its advertising is. In the July 9, 1932, issue of the *Journal* is a report on *Mercurochrome* by the Association's Council on Pharmacy and Chemistry. *Mercurochrome* advertisements had been carried regularly in the Association's publications despite recurring evidence that this antiseptic—in the solution commonly offered to the public—was not to be depended upon. But if the *Journal's* editors wished to

resolve any doubts in favor of a manufacturer who advertises heavily and continuously and had been unwilling to accept the previous evidence as conclusive, here was evidence from the Association's own Council.

First, the Council found untrue three of the manufacturer's claims: that *Mercurochrome* penetrates living tissue, that it remains active after it dries on the skin, and that it is non-toxic (does not poison the tissues). *Mercurochrome*, the Council found, did not penetrate, as claimed, it did not inhibit the growth of bacteria once it had dried on the skin, and it was toxic to tissue, particularly to the mucous membrane (such as the surfaces inside the nose and mouth and eyelids). The report quotes Birkhaug as finding that "the bactericidal efficiency of *Mercurochrome* is less than that of *Hexylresorcinol*, mercuric chloride, and iodin." It concludes with this statement: "The antiseptic efficiency of *Mercurochrome* is not outstanding, and for skin disinfection the aqueous [water] solution is distinctly inferior." And it is the "distinctly inferior" aqueous solution you get in the drug store when you ask for *Mercurochrome*.

Despite this report, the very next issue of the *Journal* of the American Medical Association carried a full-page advertisement for *Mercurochrome* on its back cover. The advertisement, over the name of Hynson, Westcott & Dunning, Inc., the manufacturer, said, in part: "Extend the use of *Mercurochrome* . . . so that you may have the full advantage of its general effectiveness. . . . If you are

. . . using *Mercurochrome* in some special field . . . try it in all fields. . . . *Mercurochrome* in 2 per cent solution is being found entirely acceptable as a general antiseptic and first aid prophylactic." This, of an antiseptic described a week previously in this same journal as "distinctly inferior" for skin disinfection.

"Biological tests conclude bran safe for normal alimentary tract," is the heading of an advertisement for *Kellogg's All-Bran* appearing in the August 20, 1932, issue of the *Journal*. What is the proof of this statement which those responsible for the *Journal's* advertising permit to appear in its pages? Bran was found to be safe for 22 *rats'* normal alimentary tracts! Shall we next read in the *Journal's* advertising pages that eating raw ears of corn out of a filthy trough was found safe for 22 test hogs; and that therefore human beings should do likewise?

The American Medical Association is rightly outraged by the activities of quacks and the vendors of worthless nostrums. Between the quacks and the directors of the Association's advertising policies, the gap is not so wide as we should wish. If a choice must be made, we should find the quacks—most of whom are ignorant—only a little more culpable than the well-informed advertising directors are, of the charge of jeopardizing the public health. Let the Association go on with its excellent work in exposing the quacks; but let it clear the advertising quacks out of its own publications—not some, or most, but *all*.

How is the consumer to be protected against advertising of products which endanger his health or even his life? The general idea back of the activities of the Federal Trade Commission (now unhappily dying of inanition) suggests a means of improving the present situation, although we know of no real solution to the problem short of complete public control of all of the manufacturing and distributing agencies involved. The Federal Trade Commission can put a stop to advertising which is deemed unfair to the advertiser's competitors. Let us have a new commission on consumers' goods with corresponding but far greater powers to exercise rigid control over all advertising for any product in any way affecting the health or safety of consumers. Such a commission would have ample funds and authority to deal with all advertising of any kind in any type of medium, which violates a strict and inflexible ethical and economic code written, not by business men, but by professional men and consumers. There are at present some State regulations concerned with advertising; but because there is no agency whose sole responsibility it is to enforce these regulations, they are everywhere completely ineffective.

There is now no law being enforced (there may be one or two strictly local exceptions) that prohibits either the sale or the advertising of poisonous or distinctly injurious foods or drugs. Such a commission*

* A commission might likewise concern itself with economic frauds against consumers, but that is another question.

as the one we propose would at once proscribe the advertising of *all* such foods or drugs. It would prohibit the advertising of foods and drugs containing potentially injurious substances unless the advertisements carried a statement of the presence and the proportion of those substances, *the nature of the hazard involved*, and a clear statement of the antidote, if any. It would, likewise, prohibit the advertising of antiseptics and mouth washes without a forthright and standard statement of germicidal power based on a standard test made by a designated testing agency, official and not for profit.

We realize the difficulties involved in such a proposal; yet only in this direction do we see the slightest hope of substantial protection for the average and ordinary consumer—not that mythical, shrewd, cautious, calculating David Harum that the courts made him out to be as they slowly built up the doctrine, "Let the buyer beware."

XI

THE FAILURE OF PROTECTION

"Thus the administration of the law began with a policy of negotiation and compromise between the Secretary and the purveyors of our national food supplies. . . ."—From the report of the Moss Committee, investigating the administration of the Food and Drugs Act, 1912.

In what precedes, the reader will have seen that the control of foods and drugs in America has been characterized by inexcusable official indifference and negligence; that such control has been hamstrung by a weak and nearly useless body of laws, State and national; that there has been a progressive weakening of official activity and concern for the public health through the pressure of concealed commercial forces in close touch with food and drug administrators; that control has been further weakened by an unfavorable body of court decisions. All of these factors have been at work, the last being probably the least important. But sheer administrative incompetence, shiftiness, and a preference for backstairs methods where honest,* scrupulously impartial, and

* We use the word honest in this relation, not with any pecuniary imputation. We do not have reason to believe that a single important official of the Department of Agriculture or of the Food and Drug Administration has been guilty of asking or accepting bribes. By honesty we mean open and forthright dealing with food and drug law offenses in the manner intended by the law

open dealing are peculiarly necessary, and finally a marked and growing indifference to the people's interests which have characterized the last three decades of the administration of the Federal Government, in our opinion far overshadow all else as causes behind the cold-blooded evasion by officials of responsibility for food and drug control. If there is to be an end to the wholesale poisoning of the public by food and drug manufacturers, the relationship of enforcement officials to both the manufacturers and the public must be clearly understood and continually kept in plain view. The question is one of great importance to the public, but at the same time it is so complex technically that a full and fair picture of all that has happened since the enactment of the Food and Drugs Act in 1906, and why it has happened, would require a book of at least a thousand pages, with documentation in an appendix at least as long. Dr. Harvey W. Wiley spent four hundred pages in his "History of a Crime Against the Food Law," in a rapid and incomplete survey covering the period up to 1929. Decline in public control of food and drug poisoning, adulteration, and misbranding has gone far since that time.*

and actually applied by Government officers in the case of an offense against the mails, or the currency—both offenses invade the public interest far less than do violations of the food and drug laws.

* Recognizing the limitations of space in this brief book, the reader will appreciate that the causes of non-enforcement of the Food and Drugs Act can be only roughly sketched in the single chapter available for the subject, but numerous references are available for those who wish more material. We must emphasize

In 1906, the Food and Drugs Act was passed after a series of shocking exposures and ensuing reform agitation lasting nearly twenty-five years. The Congressional vote in favor of this legislation was so overwhelming (Senate 63 to 4, House 241 to 17) that one might reasonably have assumed that Congress, when drafting the measure, knew precisely what its general aims were, and what public pressures and criticisms it was responding to; and that as a result of these pressures and a quarter-century of agitation, Congress meant the law to be effectively and vigorously enforced. Yet the opposing commercial forces were so powerful that within three months after January 1, 1907, when the new legislation became operative, the Secretary of Agriculture, who was legally responsible for carrying out its provisions, took the first of what was to be a long series of steps to block the will of the people and of Congress.

Responding to pressure applied by the Maine fish packers, the Secretary adopted a definition of sardines formulated by one of the business-fostering bureaus of the Department of Commerce, rather than by the Bureau of Chemistry, the agency charged by law with the technical tests and definitions underlying the enforcement of the law. As a result sardines

that there are in our files, in respect to all statements of fact made in this chapter which reflect the policies, evasions, and misrepresentations of the Federal food and drug administrators, five or ten times as much documentation as could possibly be used in anything other than a long and very dull treatise on the subject.

remain, to this day, all varieties of small fish *similar to* genuine sardines.

Shortly after, there followed other decisions by administrative officers acting in clear violation of the Food and Drugs Act's provisions, permitting the renaming of glucose and cornstarch syrup as corn sugar and corn syrup (which they decidedly are not), the importation of canned vegetables made artificially green with salts of copper, and the use of benzoate of soda and benzoic acid as preservatives. It was the original intent and act of Congress to vest in the Bureau of Chemistry, a technical and scientific body, the power to determine what acts and omissions should constitute a violation of the pure food law, and to set up technical standards required as a working basis for the enforcement of the Food and Drugs Act. Such a bureau, as it was then constituted, being removed from business considerations to a great degree by its interest in facts and in the scholarly pursuit of new knowledge, was obviously less likely than other agencies of the Government to rule unfavorably—and irretrievably, as we shall see—to the needs and rights of the consumer. But much larger plans than presaged by the decisions mentioned were on foot. It was clear to the high officials that in time their repeated overruling of the Government's scientific agency, the Bureau of Chemistry, would give rise to public protest and indignation, and a much feared airing of the public's grievances by State and city food and drug control officials, many

of whom were men of force, sound sense, and independent temper. A safer plan for a long-time endeavor to weaken the food laws was clearly to set up a new "advisory" body with an impressive title, but without definite responsibilities, and give it in left-handed fashion the power which Congress had placed in the Bureau of Chemistry *and in no other agency whatsoever*.

President Roosevelt himself appears to have taken the initiative, following appeals by powerful manufacturing interests, which resulted in the illegal substitution of a bureaucratic, slow-moving Board of Food and Drug Inspection, to supersede the functions of the Bureau of Chemistry as established by the law; and shortly afterward he suggested or concurred in the institution of still another illegal entity, the Referee Board of Consulting Scientific Experts (later known as the Remsen Board), the function of which was to be the overriding on a large scale of the judgments of the too honest and forthright Dr. Wiley and his expert staff in the Bureau of Chemistry. Secretary of Agriculture Wilson, under whose leadership this evasion of a clearly intended enactment was begun, confessed in a public hearing that the new board, superseding the law's provisions, was set up "for the very purpose of conserving the interests of the manufacturers." Dr. Wiley, doughty and uncompromising defender of the consumer's right to a pure and wholesome food supply and to protection from all adulterants and preservatives that

might be harmful, was thus completely displaced from direct control over regulations and decisions in particular cases. After all these shifts and changes, the manufacturers had not merely their "day in court," but every opportunity also for a series of secret conferences with a hand-picked agency quite outside the control of the technically expert body legally set up to enforce the Food and Drugs Act as to its technical provisions and practical application. The process has been further continued until, by the passage of a rider in an appropriation bill a few years back, the Bureau of Chemistry and its inconveniently scientific-minded staff and administrators, already hamstrung by the squeezing out of Dr. Wiley and all his policies and plans in 1912, disappeared from the control of the Food and Drug Administration, and the whole enormously important affair is now operated, not by scientists, but by the standard Washington bureaucracy headed by an adroit lawyer-politician named W. G. Campbell.

Before proceeding to consider the state of affairs under present-day enforcement of the Food and Drugs Act, we should first see the loose way in which officials have lent themselves to the nullification of laws which threaten to interfere with dividends. Said President Roosevelt to Dr. Wiley at a hearing in the President's office, attended by the Secretary of Agriculture and by business and legal representatives of three great ketchup manufacturers and canners: "You tell me that saccharin is injurious to health?"

Wiley said, "Yes, Mr. President, I do tell you that." The President replied, "Dr. Rixey gives it to me every day." To Wiley's answer, "Mr. President, he probably thinks you may be threatened with diabetes," Roosevelt retorted, "Anybody who says saccharin is injurious to health is an idiot." Many thousands of dollars of public money were spent in an attempt to "legalize" the use of this poisonous preservative and sweetener.

There are many who will rate as idiots by the standard of President Roosevelt's ill-advised assertion. Today the group includes the very food manufacturers who in that earlier day were appealing for the right to use a dangerous drug as a sweetening agent in canned corn, and another drug as a preservative capable of keeping moldy ketchup from blowing the tops off their bottles.

The preservation of dried fruits with sulphur dioxide provides another example of how lightly the executive officers charged with the administration of the Federal Food and Drugs Act reached important decisions affecting for a generation the interest of every man, woman and child. Secretary of Agriculture James Wilson speaking in 1907:

"Telegrams began to come all around me, and finally reached me that something was seriously the matter at San Francisco, and I wired back that I would be there at a certain day, and I went there. I found the mayor, the bankers, the business men and the farmers in a very great commotion. They wanted me

to talk. I said, 'I do not know what to say, I will listen; you talk, gentlemen.' 'Well,' they said, 'we have a $15,000,000 industry here in the growing and drying of fruits. These dried fruits are contracted for by the big eastern merchants. Our people borrow money from the banks, and when the fruit is sold everything is straightened out and things go on, but you people in Washington say we can only use 350 milligrams of sulphur to the kilo, and the eastern men who have contracted for our fruit will not make their contracts good; they are afraid it will not keep.'

"After listening to these good people all day I said, 'I see the condition you are in, gentlemen. I do not think the American Congress in making this law intended to stop your business. We have not learned quite enough in Washington to guide your business without destroying it; we will know better by and by, but I will tell you what to do. Just go on as you used to go on and I will not take any action to seize your goods or let them be seized or take any case into court until we know more about the number of milligrams to the kilo, and all of that. . . .'"

When the chemists then appointed to make the study of sulphuring of dried fruits submitted their report, Secretary Wilson refused to permit it to be printed. This was the first of a long series of such suppressions of data and recommendations paid for by taxpayers' money. (Such suppressions of data unfavorable to powerful interests are the standard practice in Food and Drug Administration work.) A harmless substitute for sulphuring had been

found, and wide publicity given to that discovery would have a most uncomfortable effect upon the whole dried fruit trade then—and now—using sulphur. The report remains to this day unpublished, and this permission to poison, casually granted by the technically ignorant and socially indifferent Secretary of Agriculture, stands to this day unchanged. Now, there is *no* limit set to the sulphur dioxide content of dried fruits, except, curiously enough, in the fruit the Government buys for the use of its own officials and employees, hospital and asylum patients, soldiers, sailors, and veterans. To this day no one in America—certainly not in the field of food and drug control—has devoted himself either by experiment or by exhaustive study to the technical literature, American and foreign, to determine just what the safe limits are for a preservative substance which a few American States and Japan (except when used for apricots) prohibit entirely, while other countries, including Germany, Austria, Hungary, and France, limit sulphuring to a degree that involves an embargo on the heavily sulphured fruit usual and permitted in America.

Dr. Wiley followed the general principle—when his superiors did not overrule him—that in case of doubt the questionable substance must be ruled out because the law so provides; and also for the sound social reason that the rights of a hundred million consumers in matters of health should be paramount to the rights of the few thousands or even hundreds

of thousands of manufacturers, merchants, or growers. A further sound and simple principle was that a poisonous or potentially poisonous substance which itself might do no perceptible or measurable harm, was bound, in the ordinary routine of food supply and preparation, to be combined with many other dubious substances in the mixed diet of many people; just as in arsenic poisoning, as we have shown, the same poison may reach a given consumer's stomach in a score of different foods, beverages, and medicines and even from the wallpaper of his bedroom; and will be administered quite without his knowledge along with other harmful chemicals, such as sulphur dioxide, alum, sulphite and benzoate of soda, nitrites, copper, lead, tin, antimony, zinc, and aluminum.

The present officers of the Federal Food and Drug Administration, and those of nearly all the States, operate always on a contrary assumption. Though that contrary consideration is expressly ruled out by the wording of the Food and Drugs Act, the Administration has in crucially important cases held to the view that where doubt exists, and in the absence of sure and positive evidence of harm, the questionable practice should be allowed to continue until such time as (if ever) the Administration shall establish the positive and affirmative evidence of harm to the public health or well-being. Whether, indeed, a hazard exists, the Administration never finally determines. As with sulphur dioxide, twenty-three years may easily pass during which not only is the subject

forgotten and the law unenforced, but the amount of the preservative permitted is further increased by the familiar process of "administrative erosion" or frittering away of a legal safeguard.

We have already noted that the very first months of enforcement were marked by appeals to officials, including President Roosevelt himself, by manufacturers seeking relief from the operation of the law, and that one such appeal resulted in President Roosevelt's appointment of the Referee Board of Consulting Scientific Experts. Taft, the next President, participated in the breaking down of the Department's legal definition of pure whiskey under the Food and Drugs Act—a matter which seems now of purely historical importance but which was nevertheless a severe blow to later effective enforcement of the law. Again after pressure by the business interests involved, President Taft—without warrant under the law—appointed a special commission to hear the issues and define the product in more lenient terms than those already set up by the Bureau of Chemistry, though that Bureau's definition had already been adjudged sound in seven Federal court cases. Whiskey was then redefined, literally downward to the standards of rather good bootleg whiskey of the Volstead era. Mr. Roosevelt's and Mr. Taft's conferences, called to override and forestall the honest endeavors of the technicians of the Bureau of Chemistry, did their work so well that since that time no officer of the Administration has been

able to forget that the Administration is in politics —which to a realist means in business—and that science is, for all administrative purposes, out, so far as it concerns food and drug control operations.

Briefly, the food and drug law forbids only a limited number of acts conducive to frauds against and hazards to the health and economic rights of the consumer who purchases foods and drugs that are transported in interstate commerce (the scope of the Act also includes feeds for animals and poultry), and so long as those goods are in their "original packages." The Act has no power to protect consumers against the depreciation of foods and drugs after shipment and after the original packages are "broken," to the point where they are impure or become inert, harmful to health, or poisonous. That, in theory, is left to State and city food and drug statutes and ordinances, and their enforcing officers (which means that they are not, by and large, provided for at all). The Act prohibits importation into the United States, and interstate shipment within the United States, of adulterated or misbranded goods, both phrases being defined in obsolete terms long since superseded by the advance of the science and art of food growing, manufacture, and preservation. The determinations of the fact of adulteration and misbranding were placed in charge of the Bureau of Chemistry, to be done only by it or under its direction and supervision. The Act provided that adulterated or misbranded goods which were being

shipped across state lines or which remained in their original packages after being so transported might be seized for condemnation, under a proceeding against the goods themselves rather than against the shipper.

The Secretary of Agriculture, without special warrant of law, has adopted a very limited, imperfect, incomplete, and hopelessly belated series of definitions or standards as a guide to the officials of the Food and Drug Administration in enforcing the Act. These definitions, which represent the operation of a great deal of pressure from manufacturers on officials in the direction of leniency and looseness of definition, and represent to only a quite negligible extent what might be termed the desire and need of the ultimate consumer for a definite statement and rigorous limitation on doubtful points, are (except in reference to canned goods, covered by special act of Congress) purely advisory in character, and in case a person proceeded against under the Food and Drugs Act raises the question of the legal validity of the Secretary's definition, it is necessary for the Government to prove beyond reasonable doubt not only that the commodity falls short of the "standard" but that in addition it does not conform to *trade usage* and consumer-understanding. Thus if any food commodity (like maraschino cherries, the basis of "cherry" ice cream) is generally bad or "doctored," or unwholesome or undesirable as an article of food and yet is conventionally accepted in that

condition by consumers, who are unaware that it is unwholesome, there is no action possible against the product,* unless it is subject to one of the very limited and particular kinds of adulteration which happened to be directly named and defined in the Act as passed in 1906, and which are now mostly out of fashion in the trade and are replaced by more modern techniques. The provisions of the Act did not, of course, represent any special research or effort to allow for all dangerous possibilities at that time; they are far less representative of adulterants and adulteration at this writing than they were twenty-six years ago. "Adulteration of food products almost invariably is a step or two in advance of the regulatory food chemist," said the assistant chief of the Administration in a recent address. In fact, the Act is in numerous particulars obsolete, and in nearly all its sections weak and inadequate in the powers and duties it assigns to enforcing officers and the judicial authorities.

Most of the weaknesses were present at the time the legislation was passed in 1906, and others have appeared because of court decisions which the Administration chose to regard as prohibiting strict enforcement. Under one gross defect of the law a product distinctively named, such as "*Bestette*" or

* This is the interpretation of the law used by the officials of the Food and Drug Administration. A lawyer who has made a careful study of food and drug cases insists that this interpretation is incorrect, and that the officials choose to ignore powers the law vests in them.

"*Old Manse*" ("process cheese") need conform to no definition or standard, even the imperfect and incomplete ones of the Administration, or of the manufacturer, or the trade, except that it must be free from ingredients known to be poisonous or deleterious. Under this provision it is seen that a staple food substance like jam can be so modified and loaded with other materials, so long as they are not intrinsically and certainly poisonous, that, without anyone's being the wiser, it becomes a borderline food substance like syrup or candy, which is too high in sugar, glucose, pulp, pectin, or some other material, for safe general consumption; so that persons who take an accustomed amount of jam as harmless to their particular digestions may, if they use one of these substitutes or imitation preserves, eat twice the amount of sweets they had meant to. The law not only tolerates distinctive-name labeling practically free from control by the provisions of the statute, but, since it sets no binding standards for foods, permits widely different substances, healthful for one person and harmful to another, to be sold under the same label. Thus "salad oil" or "salad dressing" or lard substitutes and shortenings may or may not contain cottonseed oil, or they may contain cottonseed oil in June and not in February. Cottonseed oil is intolerable and injurious to some persons, but the food and drug authorities give no consumer the least help in avoiding it. Of course, the officials may argue, the consumer can study food chemistry for a year or two and set

up at home the delicate and costly apparatus necessary to distinguish one edible ingredient from another.

Again, a food manufacturer who wishes to avoid the requirements applying to canned goods need only find means to pack his product in some form to which no regulations apply. For example, he may sell his products to a group of consumers who purchase it in competition with, and for the purposes of, ordinary canned goods, yet if he packs it in buckets, tubs, kegs, casks, or barrels, he is completely outside the terms of the Food and Drugs Act applying to his competitors. In the same way, in the earlier days of the Act, the meat packers evaded its labeling provision requiring net weight to be shown on the label by insisting successfully in the courts that a wrapped ham or side of bacon was not a "food in package form" within the meaning of the Act.

One of the most important weaknesses of the legal system governing foods and drugs is an amendment which was itself passed to correct a loophole in the law provided by a Supreme Court decision of May, 1911. This amendment defines as misbranded any drug preparation bearing *both* false and fraudulent claims for cure, prevention, or mitigation of disease. The original Act clearly took account of the fact that it was very difficult and often impossible to prove intent (implied in the word "fraudulent" above); and to avoid the obvious evasion of responsibility by the allegation of the person proceeded

against that he had not intended to defraud, Congress by vote rejected an amendment to introduce the word "knowingly" as a qualifying adverb in defining the elements of the crime. This word, if it had been put into the law, would have relieved the defendant of blame in all cases where the Government was unable to prove the defendant's actual intention to perform the acts constituting an offense.

But the more recent patent medicine amendment, reflecting the growth of the power of the food and drug manufacturer over drug legislation, is so phrased that not only must the medicine be falsely labeled, but its sale must have involved bad faith and dishonest intention on the part of its maker. This, of course, excludes the possibility of successfully proceeding against a product *falsely labeled by the manufacturer* and *fraudulently represented by the merchant*—a typical combination which just as effectually gulls and defrauds the consumer as though the false labeling and the fraudulent representation were made by the same person. It also fails to penalize a manufacturer who is clever enough to label falsely while avoiding the giving of evidence of fraudulent intent beyond all "reasonable doubt" required for successful prosecution.

The subtle and deadly poisonous radium waters discussed in an earlier chapter were entirely legal because of another large gap in the law, but the Administration "because of the financial condition of the Government" does not "at this time" recommend

enactment of legislation to prevent such products and hundreds of other poisons from being sold in interstate commerce. This view of Dr. Dunbar, assistant chief of the Food and Drug Administration, who thinks that the Treasury cannot stand the strain of preventing the death of citizens and taxpayers from radium water and other deadly substances now untouched by the law, typifies the politician's point of view common in Washington and in State capitals, that a loss, no matter how serious, does not amount to anything if it is a diffused loss and one which the public generally does not know of and for which it cannot, therefore, blame the party in power. Millions have heard of the radium-water death (just as they heard some years ago of the fatal poisoning of several women workers making radium-glow watch dials), but only a few have realized that behind the ignorance and shyster practices of the nostrum vendor, there lies an incompetent and indifferent and quite cold-blooded Government régime, unwilling to step into a public emergency of this or any other kind unless public opinion, *including that of the most influential business enterprises concerned*, demands such intervention. Everyone in touch with the subject felt certain that the death of Byers had brought enough publicity to shock the Food and Drug Administration into instant action, but we habitually underestimate the Administration's indifference to public health hazards, and the smugness of its officers' unconcern over unfavorable publicity.

No positive action will be taken even to the extent of recommending a tightening of the Federal and State laws governing poisons, and the radium-water deaths will in due time reappear in a new form—radium yeast cakes or radium hair tonic perhaps; and death or injuries will again, we are convinced, be proclaimed in the press (unless they involve the product of some powerful and financially successful food or drug interest and are not too dramatic or numerous to be successfully hushed up by the newspapers). There are many weaknesses in the Food and Drugs Act on the purely economic side of consumer protection that cannot be discussed in this book, but they must be carefully examined in another place by medical and legal and economic experts as part of the basis of any plans for enactment of an effective and enforceable food and drug law.

The postal fraud order is, as we have noted, used in some cases to supplement the Food and Drugs Act, but the secretary of the United Medicine Manufacturers' Association, a powerful and efficient organization of the manufacturers of "patent" medicines, was happy to report recently that under that type of prosecution the association had secured "adjustments without any criminal procedure, and with only one exception had made satisfactory adjustments without any change in the usual business routine." As to the medicine-makers' opinion of the Food and Drug Administration's enforcement work, the following comment of the same business leader

shows how slight need be the concern of a nostrum-seller over the now academic and vague operations of the food and drug law:

"During 1931 although *many* of our members have had seizures and warnings, *yet in every instance that our legal department has been appealed to for assistance,* it has been able to conduct these cases in such a manner, that apparently *business has gone along in its usual course.*" [Italics ours.]

We cannot possibly consider all the points on which the Department fails to enforce the plain terms of the Act. Whereas the law was brought into being primarily to protect our food and drug supply from additions of poisons and harmful substances, both testimony before an appropriations committee and an official report of the Secretary of Agriculture show it to be the primary concern of the Department to avoid antagonizing and, of course, ever imprisoning persons involved in a big corporation's offense against the Act. Indeed, the Administration emphasizes the help that its line of enforcement gives to the producer who is a victim of unfair competition by an adulterator or misbrander in the same line of trade. But *every reference* to the producer in the Food and Drugs Act, said Dr. Wiley, is *punitive,* and none is of the correctional and educational character that the Department has come to consider the basic purpose of a law, containing never-applied penalties up to a $300 fine and one year in prison

—penalties sufficiently threatening to the corporate officers to make even the most powerful corporations take great care (which we now know they do not take) in skirting the borders of illegality in their product. There is no right inherent in the office of the chief of the Food and Drug Administration or in that of the Secretary of Agriculture to decide that in pursuance of the general ideas and social policies of Messrs. Harding, Coolidge, and Hoover, they may turn the statute from its original punitive purpose protecting the public interest, to the guiding and educational one of bringing the manufacturers into a harmonious understanding with the changed and attenuated purposes of the Federal officials.

The law provides a maximum penalty of $200 for a first offense, and fines up to $300 or imprisonment for one year, or both, for any succeeding offense under the law. That is, it does not require of the court any automatic increase in the penalty on the second offense or succeeding offenses after the second, nor does it give to anyone anywhere the power to stop the operation of a business for continuously violating the Food and Drugs Act, no matter what the hazard to the citizen, no matter what incompetence, ignorance, or wilfulness may characterize the acts of a maker of contaminated, filthy, or poisonous food or drugs. Nevertheless, the Act assuredly does not authorize the Administration's practice of taking aside in a private and secret hearing, for a scolding or an educational process, the ridiculously few of-

fenders who are detected in their illegal and criminal operations. The Act's authorizing that goods be seized or confiscated for condemnation was clearly intended to permit the summary and forcible removal from the market of dangerous, adulterated, poisonous, or misbranded goods which were a menace to public health and which, in emergency, might need to be acted against so urgently that a punitive proceeding, only, against a manufacturer or dealer, with its long course of appeals to court above court, might be too slow to serve the public's necessity. This action against the goods instead of against the offender is now used for a very different purpose by the Administration. By the use of this provision, the prosecuting officers run no risk of the offender's receiving at the hands of the court the more unpleasant penalty of fine or imprisonment for second, third, and tenth offenses against the Act. In second, third and tenth offenses, the Administration proceeds *in rem*—that is, against the product, as though it were the offender, so that the heavier penalties never come into operation, the responsible individual or corporation by this method of procedure being left out of the action entirely. If the owner of the goods loses the action at bar, the worst that can happen is loss of the value of the shipment, crate, or carton of confiscated goods which were adulterated or misbranded. Often he does not suffer even that ridiculously inadequate penalty. The goods are frequently returned to their owner or shipper for "reconditioning" or "relabeling" or use in remanufacture in some fashion to bring them within the law, and—as we have seen in cases already cited—no adequate measures are taken to guarantee that the reconditioning will be honestly and competently done.

Thus it comes about that only one man has ever served a jail sentence for a Food and Drugs Act offense. Clearly, it is not the intent of the Administration to punish business crimes by even a very short prison sentence, no matter how many be poisoned or die. Just as Mr. Sinclair is the only rich man we can think of, who in recent years has gone to jail for a Federal offense (and then under an extraordinary and arrogant provocation of the court and at an enormous cost for successful prosecution by the Government, with the employment of a special and really able prosecutor), so no corporation officer need fear the exaction of the penalties of the law for any crime of adulteration, community poisoning, or large-scale swindle by misbranding that he may commit. In these times business may suffer pecuniary losses; but not—under Mr. Campbell's lenient food and drug enforcement policies—through penalties for crimes that their executives and agents may commit.

How far the punishment meted out by the courts in food and drug cases may act as a deterrent to future offenses, we can judge from a recent case involving two gallons and three pints of the fluid extract of ergot discussed in an earlier chapter. This

seized shipment was found to be of one-fourth the standard strength, so that when a single teaspoonful was actually being administered, four teaspoonfuls would have been required to give the intended effect. The punishment administered to the manufacturer who was found guilty of purveying this dangerously impotent tool to the obstetrician was the loss of about four dollars' worth of fluid extract of ergot, condemned to be destroyed by the Government, "no claimant having appeared for the property": literally not enough of a loss to warrant the manufacturers' hiring a lawyer to defend the action. And note this important point: the shipment of this faulty ergot does not constitute a first, second, or any other offense against the Food and Drugs Act by the offending company; hence that company need not fear that their next blunder or mismanagement will subject them to the slightest hazard of a heavy ($300!) fine, or imprisonment for the responsible individual. For this and thousands of other offenders, the slate is thus wiped clean—the Food and Drug Administration has seen to that by bringing its suit in the form: "U. S. versus three pint bottles, et al [*sic*] of Fluid Extract Ergot," rather than against the manufacturing corporation or one of its responsible officers. Burroughs, Squibb, Merck, Mallinckrodt, Sharp & Dohme—all may offend as often as they please and pay a smaller loss for the error or carelessness, no matter what the danger to the public, than one of their directors will pay for wounding the feelings of

a sensitive traffic officer in an argument about parking. The case cited is typical, not exceptional, and records the procedure that is almost invariably followed against a reputable or substantial business concern. First offenses, by direct prosecution of the corporation rather than of its goods in commerce, are made only in cases of small or unimportant or shyster firms below the fringe of toleration. No fear that the present food and drug officials of the Department of Agriculture will ever, by a successful prosecution of a "first offense," be put in a position where they must ask for fine and imprisonment against the makers of any prominent remedy or packaged food. The Government's mode of procedure against a proven cheat in food or drugs or one who endangers public health is very different from the manner and swiftness of its action against a suspected radical, or a ragged and starving "bonus army" thought to be illegally occupying an abandoned building.

It is now entirely safe, says the Food and Drug Administration (performing a function somewhat outside those established for it by the Food and Drugs Act) "for the can-opener to be 'Boss of the Kitchen' . . . because Uncle Sam has inspectors on duty from Maine to California [sixty-five inspectors controlling twenty billion dollars' worth of interstate food and drugs, remember] . . . watching every

place [3,300 places] where food is canned for human consumption. . . . American canners are almost universally committed to a policy of giving the consumer an honest product conforming with every reasonable regulation, not only because it is the right thing to do but because it is the best business policy."

The *Delineator*, a favorite women's magazine, taking the Food and Drug Administration's claims at their face value and knowing nothing of impotent ergot, or of contaminated ether, or of apples, grapes, cabbages, and celery coated with arsenic and lead, says: "No impure, harmful, or unwholesome food product can travel very long about this country from one State to another without getting caught . . . [for] the Federal Food and Drug Administration, too, 'always gets its man'!"

Published announcements of the Food and Drug Administration consistently reveal an apologetic or conciliatory attitude toward the food manufacturers whose products it is presumed to be regulating. If the label statements of net weight are too small or too blurred to be read, or are concealed among a mass of lithographed foliage or fruit, such concealment of the facts from the consumer is due probably to carelessness or a consideration of attractiveness in the arrangement of the label, judged Dr. Frisbie of the Administration in an address given at the Bureau of Standards in 1931.

These are strange statements for sober public officials to make to adult Americans. We can but

wonder what extraordinary quality there is in canners which makes them lose all track of dividends and think only of the people's good, and so puts each and all of them on a plane far above the "reputable and conscientious" manufacturers of ether and ergot and tuberculosis cures. If canners do represent such a consecrated type of business enterprise, it becomes difficult to explain why it has been necessary to exercise constant and strict surveillance, with numerous court cases against canners of Alaska salmon, packed in a decomposed condition, a large number of whom flatly refused to bring their product into proper condition except *after* court action, and who, in defending the suits, even argued that they had committed no offense since it could not be proved that rotten and decomposed fish was harmful to the health of the eater. In one year, eighty-six shipments of canned salmon were seized and ten firms proceeded against for shipping decomposed goods. At another time California canned mackerel "was marketed almost invariably under labels which gave the impression that it was salmon." And in April, 1931, the Administration reported two fines levied for shipment by a western packer of 2,000,000 cans of partly decomposed canned salmon. An honest product "conforming with every reasonable regulation"? Again, as recently as July, 1932, the Administration had to seize fourteen hundred one-pound tins of crabmeat packed in a grossly insanitary manner by a Maryland company for sale in the city of Washington

where the officials themselves reside. We question the wisdom of a department's undertaking, while committed to the protection of the food supply, general eulogies and good-will advertising, at the public expense, for one of the industries it is supposed to regulate, with all the false and unreliable generalizations which always characterize such propaganda. This policy of fawning upon a given trade interest, and publicly flattering food-manufacturing industries in general, has put the Administration in the peculiar position of being concerned more with the prevention of unfair competition than with the protection of the consumer. A watch-dog so friendly that he no longer barks at enemies of the household, much less preventing their entrance by the window, is not up to the difficult task of detection and alarm which has been given the Department of Agriculture with respect to industries, conscientious and other, vitally affecting the public health. We very much need a new watch-dog, who will lick fewer boots, and who will make his friends in the household rather than among the second-story men.

The manufacturers of ethical drugs and medicines, the quality of whose products the department defended in the investigations of ergot and ether already reported, in the face of overwhelming evidence of their deteriorated or dangerous quality, regard the administration of the food and drug laws as economical, efficient, and effective, and oppose a movement to transfer the enforcement work in the

interest of Governmental economy, from the Department of Agriculture to the Bureau of Public Health. Even the manufacturers of out-and-out patent medicines, who in most matters are almost the only group to criticize the Administration, have confidence in its general lenience and generosity to offenders, sufficient to move their leading attorney to write that if control of advertised claims for "patent" medicines were to be set up by Congress, it were better that such legislation should be administered by the Department of Agriculture than by any other agency. That confidence in the willingness of the Food and Drug Administration to give the minimum regulation that the public will stand for under the law is echoed by the major trade journal of the drug industry in this passage:

"Out of long experience, the Department of Agriculture has got a reasonable conception of the economic importance of the act. [That is, to producers—the *Oil, Paint and Drug Reporter* is not given to expressing its interest in the welfare of ultimate consumers.] It has come to a fair measure of recognition of the industrial problems involved in compliance with the law. It is not inconsiderate of the right of manufacturers to be heard and to be informed. Although a more satisfactory [to manufacturers] administration of the act in certain particulars is possible, the situation could be worse; and it would be worse if the act were administered by the Pubic Health Service."

Some excerpts from an article, "Reasonable Drug

Control", in the September, 1932 issue of *Drug and Cosmetic Industry*, will throw further light on the growing tendency of the Food and Drug Administration to let the manufacturers determine enforcement policy. Drug officials have been following what the trade itself apparently believes is leading toward a very satisfactory "hands off" policy:

"Whatever the cause or the reason, drug trade representatives agree that relations between the trade and the Food and Drug Administration . . . are more satisfactory than during several recent years. Improvement in relations between the Department and the trade has developed principally since Dr. Frederick J. Cullen finally succeeded Dr. J. J. Durrett as Chief of Drug Control.

"Cullen says he wants to be helpful. . . . Prominent trade representative has found the Cullen administration so satisfactory that he has not had to take up a single label case during the past six months or more.

"Certainly, there have not been so many multiple seizures of drug products made by the Food and Drug Administration of late as formerly.

"Finally, it is reported that officials of the Department of Agriculture . . . have not wanted to burden the business interests of the country unduly with prosecutions, regulations, restrictions, and what not, during the economic depression. A year or two ago it seemed quite obvious that this principle of less interference, if

complete non-interference were not praticable, could be applied with benefit and profit to the drug trade.

"Whether it was the Cullen plan and purpose to reduce Government interference with the trade with a view to promoting a business revival, can not be stated authoritatively. However, apparently, one result of the Cullen policies has been reduction of such Government interference. As the rising sun of returning prosperity begins to tint the industrial and financial sky, indications are that the drug trade is simultaneously rising to bestow its blessing upon the genial commander in chief of Drug Control. However members of the trade may differ among themselves, as between Hoover and Roosevelt, the prediction is made here and now that, given opportunity, they would cast a practically unanimous vote for Frederick J. Cullen."

The preference of drug manufacturers for administration by the Department of Agriculture lies in the fear that the Public Health Service, under the direction of physicians, would not permit the medicine manufacturers to have the strong influence in direction and control of the enforcement policy which they now have respecting an Act surely meant rather for the protection of the consumer rather than for preventing unfair competition between various levels of adulterators and false labelers of food and medicines.

According to the Department's official statement of the duties of the Food and Drug Administration,

the primary purpose of the law under which it operates is to promote purity and truthful labeling in certain commodities essential to the public health and the economic welfare of the nation. Only a "very small proportion" of manufacturers, says the statement, "are deliberately, negligently, or knowingly violating the law in some respect," and it is upon this very small proportion—distinguished and discovered, we are convinced, by means known and knowable only to Food and Drug Administration officials—that the efforts of the Administration may be concentrated. Imagine an inspector of cement or rails for the Pennsylvania Railroad who, knowing in advance which firms "do an honest and legitimate business" (the food administration's own words), concentrated his cement and rail inspections and tests on those who do not conduct their business in this honest and legitimate way, thus making unnecessary any inspection at all of the product of the good, reputable, and reliable firms, and making the services of one inspector do where otherwise twenty-five to a hundred would be needed.

We assure our readers with all possible emphasis that, to us as technicians, this simple exposition of the food inspection problem does not make sense. If there are, as officials state, twenty billion dollars' worth of food and drugs (besides bulk meats, which are covered by a different control system) moving in interstate commerce and so subject to the control of the Act and the Administration's inspectors, we

do not see how any honest technician or expert of any qualifications whatsoever, short of wizardry and second-sight, can know in advance which part of the twenty billion dollars' worth he should concentrate his attention on. (Oddly enough, meat inspection, also conducted under the Department of Agriculture, goes on quite a different theory, and the 2,400 meat inspectors do their work at all packing houses subject to the law and not just at those which are thought not to do "an honest and legitimate business.") The department has never at any time done any large-scale sampling of the twenty billion dollars' worth of annual production of food and drug industries through the large corps of several thousand inspectors and research workers that would be required. It has never had the means to do it, and has never proposed to do it, nor asked Congress for the funds to do it.

Mr. Campbell, director of the Food and Drug Administration, had admitted that on either of two products, butter and ginger jake, the Administration could easily have utilized in any given year its whole pitiful force of sixty-odd inspectors and its whole resources along other lines, and in each case he testified in language showing that he regarded it as absurd and unthinkable that anyone should expect such thoroughgoing activity. If a fifty-million-dollar economic loss was taking place through the injuries and casualties coming from ginger jake alone, it is clear not only that the Department of Agriculture should

have put its whole available emergency force on the problem, post haste, but that it should also have asked an immediate grant of ten million dollars from Congress (assuming that the sum could have been effectively used by a bureau with so glaring a lack of any background of preparation for such emergencies) to permit the most energetic action against this deadly hazard, with its fifteen or twenty thousand disabled victims.

The ether situation likewise was serious enough to demand careful study and energetic prosecutions and confiscations of contaminated ether by the largest field and laboratory force that could in the emergency have been thrown against it. Nothing of the sort happened. No public alarm was sounded. Not even physicians and hospitals were warned, by the Government or by the journals of their profession. The subject was kept as quiet as possible, to the very great advantage of the ether manufacturers (and, as the evidence indicates, of certain surgeons and hospital administrations as well), and no appeal was made for public interest or support of an energetic suppression of the defective product by the Administration. The Food and Drug Administration felt, as shown in its official testimony before a Senate committee, and in an article written by its chief, that physicians might test the ether themselves, but it sent out no alarm suggesting such tests or telling how a busy physician was to make them.

When a devastating plague of corn-borers threat-

ened the farmers' fields, Congress was ready upon appeal from the Department of Agriculture—the natural channel for such appeals from the farmer to the legislature—to supply funds up to $10,000,000 to help control or eradicate the pest in an area mainly in four States bordering the Great Lakes. The boll-weevil and the grasshopper have in their turn been the occasion for large special appropriations for emergency measures, and in a single year a 4¼-million-dollar fund was made available for emergency fighting of forest fires by the Federal Government. In the case of emergencies affecting the health of the population—arsenic spray residue, adulterated and impotent ergot, ginger jake, and hospital ether—it does not even occur to the Food and Drug Administration to demand from Congress what it has every right to ask for: a special fund to permit effective enforcement, and at least approximate safeguarding of the particular risk the public must run in such cases. Last year, after the arsenic hazard had been acute for several years, the Department asked for and received from Congress a fund of a paltry $15,000 to permit it to study the arsenic-spray residue problem, not to make possible additional immediate enforcement activities under the Food and Drugs Act to remove the danger. And curiously characteristic of the Administration's thinking was the argument made for the fifteen-thousand-dollar grant: that without it American producers ran a serious risk of having embargoes against their fruit

in foreign markets—exactly the same argument used by the Administration officials when asking recently for a small fund to permit some study of the excess sulphuring of dried fruit. Are members of Congress likewise so business-minded that poisoning hazards are viewed as important only in the risk they involve of losing a foreign market for American goods?

Because producers want it, though consumers for the most part have never even heard of it, a Market News Service is provided by the Department of Agriculture at a cost of several hundred thousand dollars higher than that of operating the Food and Drug Administration, whereas the latter affects, by its performance or its failure, the life and health of nearly every man, woman, and child in America. Grasshopper control helps a farming population (fully deserving of Government aid), but food and drug control affects the whole population dependent upon supplies of food and medicine and has no disadvantage to any living person in America except some thousands of food processing and packaging concerns which would have their dividends somewhat reduced for a time by an aggressive administration of the law. So far as honest and competent food and drug manufacturers and fruit and vegetable growers themselves are concerned, they will not lose by higher standards, except for the inequalities that will occur during a transition while an adjustment to those standards is being made.

An unenforced or half-heartedly enforced Food

and Drugs Act is a breeder of disturbing and lasting inequalities, which result in sporadic and confusing pressures upon Congress from producers of honey, preserves, and apples, and from every other conceivable producing and processing interest, and substantially none at all from the men and women who consume the product, and their legal and other representatives. (Practically, of course, and compared with the manufacturing, retailing, transportation, and farming interests, the general public have no representatives.)

What incentive to prepare unsulphured apricots when sulphured ones command a better price among consumers like Mrs. Sweeney, who has no test tubes and no reagents and no knowledge of their use (just as her family physician has no equipment to test ether for her operation or ergot for the birth of her next baby)? To her, indeed, the sulphured fruit looks rather better, having a plumper, moister, and fresher appearance than the better fruit which is free of preservatives.

We cannot blame any apple grower for begrudging increased expenditure from his limited and now disappearing earnings, to free his fruit from arsenic to any greater degree than the Government officers insist upon. In so far as one man takes extra pains and his neighbor does not, the first suffers a loss for which no one will reimburse him. His extra costs will not be reflected in the price of his product, since the market has no means of distinguishing the poisonous

from the poisonless. Nor will the commission agent or buyer as a trade intermediary have any interest in making the distinction, so long as the consumer whom the product ultimately reaches does not know and has no one to find out for him. The loss of one's customers by slow poisoning has never been a matter of great concern to commission merchants or to grocers, wholesale or retail, though it is true that sick or dying consumers, even babies with arsenic-eczema and lead colic and sulphite stomach ache, do not make for thriving trade.

The Food and Drug Administration's million-dollar appropriation suffices to provide 230 employees of technical grade, of whom 65 are inspectors. These men, for reasons and by means apparent to no one experienced in technical inspection and control work, are expected to be experts on and active in the identification and precise description and pursuit in thousands of trade channels of over 110,000 different proprietary medicines and pharmaceutical products made in the United States, as well as the additional thousands of kinds imported. This would be something over 500 kinds of drugs for each technical employee and 1,700 kinds per inspector (one and one-half million dollars' worth of *patent medicines alone* per year for each technical employee, without allowing for an enormous number and complex variety and brands of foodstuffs for each besides). There are around a million brands of canned fruits, vegetables, fish, and similar products shifting

constantly in name, type, and description. The actual number of brands and kinds for which each employee should in part be responsible is, of course, far greater than these astronomical magnitudes might indicate, since for geographical and other essential administrative reasons, the scope of the work of many inspectors and technicians would necessarily duplicate that of others located in other territories or assigned to somewhat different duties. Clearly a quite impossible, unworkable, and fantastic degree of spreading a small staff of whatever qualifications, over a chaotic and unrationalized field of operation!

How many kinds of drugs and foods, raw, crude, bottled, preserved, canned, smoked, pickled, dried, salt, brined, frozen, etc., there are altogether, we have no idea and we doubt if anyone can do more than guess at the number. But apart from the enormous volume of products involved, each kind and each method of distribution involves its own problems. As to volume, the total of foods and drugs together in interstate commerce (omitting meats, which are handled by a separate bureau) runs to twenty billion dollars. Divide that sum by 230 (technical personnel) and see for yourself why interstate traffic in foods and drugs, is, except for a faintly discernible thread of routine operations mainly at ports of entry, controlled to only a quite negligible degree. If you have your doubts about the capacity of sixty-five inspectors (only a part of whom are technically

trained and have scientific knowledge or experience) to control each year three hundred million dollars' worth each in foods and drugs moving rapidly and confusedly into ports and frontier stations, and across State lines in ships, barges, freight and express cars, trucks, farmers' wagons, and peddlers' carts, you may be aided in getting at the impossibility of the problem, with present facilities, staff, and system of ideas governing food and drug administration by considering that while the average American each year consumes $200 worth of interstate drugs and food other than meat, nominally controlled by Federal authority, only about *one cent per person* is collected in taxes to pay for the inspection and test of that $200 worth of food. Does anyone know of any other enterprise where *one cent* provides office overhead, inspection, test, identification, pursuit of products escaping control, factual and technical basis for legal action in courts in every jurisdiction in the country, and research, for $200 worth of anything from bicycle tires to alarm clocks? That *is* Governmental efficiency!

It is also downright nonsense, of a very misleading and dangerous sort. *Seventy cents* per person per year (a tax of but one-third of one per cent on the total consumption) would hardly do the work well under the educational and moral-suasion plan pursued by the Department. A quarter as much, or eighteen million dollars a year (instead of one million) might do a fair job to begin with, if a tightly drawn

food and drug law were enacted with the consumer's health and economic rights safeguarded in detail and without the present ambiguities, and if penalties were enforced, including, as indicated hereafter, means for getting at persons criminally responsible but now never brought to book because of the corporate screen which protects anyone (except the one Porto Rican magic-salve vendor) from ever having to pay by personal punishment for an adulteration or poisoning of the most blatantly ignorant or cruel or ruthless kind. That personal responsibility can—and must—be provided for, but assuredly will not be by the legal brains now available in Department of Agriculture circles. We shall ourselves suggest a method for making crooks suffer detention and restraint, which, if applied, would for a time at least postpone the next operation of brutal corruption and fraud which any particular shyster now engages in as a matter of course, as do the patent-medicine vendors with their diverse and deadly quackeries. To expect to prevent offenses under a law so vitally affecting economic interest and profits of business enterprisers as the Food and Drugs Act, by a campaign of education and guidance or by trifling fines and confiscations, is as unrealistic and puerile as proceeding against hijackers, gangsters, and pickpockets by a series of politely phrased circular letters from the district attorney's office, or by prosecution of the criminals under the city ordinances against jay-walking or peddling without a license.

From the standpoint of failure of public protection, the principal weakness of the Administration's operations is in the secrecy with which its business is conducted. This secrecy is extended not only to suppression of the substance and the results of conferences with manufacturers who are threatened with prosecution, but even to failure of the officials to give the public or the press access to the records in the case of corporations or individuals formally proceeded against in the courts. The fact that such-and-such a corporation has been shipping decomposed canned salmon, or frozen rotten eggs for bakers' use, or wormy figs, or impure ether, never reaches the general public's knowledge and is made known to a few, months or even years after the act is of current interest and importance, and *long after the judgment is handed down by the courts.* Such matters when ultimately reported by the Government are set down in the dullest and most uninforming documents which the legal lights of the Department of Agriculture can put together, and so are read by practically no one except trade association executives, competitors of the firm proceeded against, and lawyers making ready to defend similar suits, or arranging a client's labels or methods of shipment in anticipation of one.

A former official of the Department, of whom inquiry was made some time ago on the philosophy behind this "special handling" given the cases involving food and drug misbranding and adulteration, as contrasted with the publicity attending other legal processes in the courts, explained that the suppression of the facts, charges, and accusations involved in pending food and drug cases occurs at the instance of the legal officers of the Federal Government, and in particular of the Department of Justice through which all Food and Drugs Act cases are handled before the courts. It would be unjust, he felt, to give out this information in advance of the decision by the court and inconsistent with Anglo-Saxon ideas of justice to give publicity to a legal action which might result in acquittal rather than conviction of the accused.

But we pick up the *New York Times*—the most conservative in the reporting of news of any standard newspaper in the United States, and always especially considerate where business interests are involved—and find the following news stories in the issue of August 3, 1932:

Woman held in $1,000 bail on auto death, on charge of homicide.

Woman held in $1,000 bail for issuing worthless check on Racine bank.

Brooklyn man shoots three when crossed. Held on charges of felonious assault and possessing deadly weapon unlawfully.

Pennsylvania public utility commissioner resigns in face of graft charges an hour before hearing. Charged with accepting $150,000 gratuities and a trip abroad from Philadelphia traction interests.

Are we to suppose that the largest and most successful American newspapers do not know and understand Anglo-Saxon ideas of justice? Newspapers that indeed assure us that they are the practical bulwark of Anglo-Saxon free institutions!

It seems to us that this former departmental official turned the whole matter upside down. It is an essential element of Anglo-Saxon judicial administration that the courts shall be conducted in the open, and that every detail of the legal action shall be open to public view and comment, from the handing down of the indictment (in this case corresponding to the filing of the formal charge by the Department of Agriculture's officials) to the execution of the penalty or the acquittal of the defendant. As a matter of fact, the customary newspaper practice in this country is to discuss charges against individuals most freely, and with the least possible consideration for the rights of the accused, long before even the grand jury has heard or acted upon such charges.

We, as citizens and victims of poisonous and fraudulently labeled food and medicine, have a right to know exactly what goes on and under what pressures and influences. We have a right to demand an instant reversal of the policy set down in a letter of the chief of drug control:

"The Administration cannot with propriety discuss products manufactured by other concerns with representatives *other than those of the company.* [Italics ours.] We are authorized to publish notices of judgment after court action has been caused [*completed* is evidently the meaning] giving the Government's analysis and the findings of the court."

Another official comment is to the effect that the punishment inflicted by the Food and Drugs Act lies in the publicity, and that this is what the manufacturers dread and not the small fine. Clearly this puts us in a dilemma. The manufacturers do not fear the small fines, for Director Campbell of the Administration is quoted as saying, in explaining the adoption of the newer corrective and educational as against the punitive policy which the law provides, that "the pure food laws provide for such mild penalties that a manufacturer could pay the fines imposed the same as he pays insurance and continue to do wrong."* (In referring to mild penalties, Mr. Campbell means the mild penalties applied *as the law is administered by his Department,* where cases of substantial character could be—but are not—brought to the court in a form calling for a heavy fine or imprisonment, or both, which the law *does* to a degree provide for, in spite of Mr. Campbell's comment.) Mr. Campbell says that they do not fear the small fine; it is the publicity they fear. But the Department often does not give publicity at all, or only so long after the case is brought that all current news significance with respect to the adulteration or misbranding practices of a manufacturer is lost.

* *Journal of Commerce,* August 14, 1930.

Clearly, under this line of meaning, the manufacturers have precisely nothing to fear. The fines actually assessed are too small, and the dreaded publicity which is "the real punishment" does not take place. The suppression by the Administration and the indifference of the newspapers together prevent that.

There are some exceptions to this code of practice. If it is a small and relatively defenseless enterprise, particularly an individual rather than a corporation, or if it is a foreign person or corporation that is accused, the legal officers of the Government seem to find their Anglo-Saxon ideals of government adaptable to the circumstances. Thus the chief of the New York food and drug enforcement station, through the Washington publicity bureau of the administration, gave out in July, 1932, notice of the seizure (not yet adjudicated) of 114 gallons of salad oil found misbranded. This shipment was not adulterated or dangerous in any way, please note, so that no such health hazard was involved as in thousands of the cases on which information was suppressed and not given to the press during the period of its news interest. We are given no reason to suppose that anything was involved here different from the customary run of cases; but there is more than a suspicion, gathered from the authors' wide reading of reports of the Administration, that an Italian importer does not cause in the heart of an American legal official any such special welling-up of Anglo-Saxon ideas of

justice as would apply to a violation by reputable domestic corporations.

In what follows we observe a remarkable and dangerous capacity to use facts and argument in a fashion calculated to aid producers in their illegal practices and to hinder the consumer in any effort to protect himself from excess use of preservatives and injurious foods and drugs.

In *American Medicine* of March, 1930, the editor of scientific publications of the Department of Agriculture wrote the following in an article called "Fake Remedies and Government Regulation": "The United States only permits 350 mgms. of sulphur dioxide per kilogram as a maximum, and Hungary, Germany and Czechoslovakia allow 1,250 mgms., England 2,000, Canada 2,500, and New York State 2,000. . . ."

Since we had learned from the analysis of various samples of dried apricots and peaches tested for Consumers' Research that 350 milligrams of sulphur dioxide per kilogram of fruit was so far from being the enforced limit that the eight samples tested showed 670 to 1,700 milligrams (the least adulterated sample having twice as much as the maximum amount permitted by the Federal authorities according to this quotation) there was evidently here a very serious misunderstanding or misrepresentation, or else a practically complete failure of enforcement in the area where these samples were taken. We therefore asked the head of the Food and Drug Administration

for an authoritative and official statement of the proportion of sulphur dioxide tolerated in commerce. From official letters of the Administration, concluding at the end of March, 1931, we learn:

(a) The Administration's policy is no longer based upon the 350 mgm. limit set by Dr. Wiley and his co-workers. [This limit of 350 mgms. per kilogram was officially withdrawn by Food Inspection Decision No. 89 which, as the chief of the Administration implies, sets no limit at all other than such as may be implied in the vague term: the "ordinary quantities" of sulphur dioxide.]

(b) The Administration's present policy is based on an unpublished work of the Referee Board of Consulting Scientific Experts, and upon conferences with officials of the Bureau of the Public Health. This joint consideration was not yet finished and no report of the negotiations made public [March, 1931].

(c) The Administration's present control of sulphur dioxide is based upon findings indicating that "positive evidence of potential danger does not exist*

* Note that the head of the Administration did not know, or assumed that his correspondent did not know, that the Food and Drugs Act he is charged to enforce penalizes not on the basis of "positive evidence of potential danger" but on evidence of "added poisonous or other added deleterious ingredients which *may* render such article injurious to health . . ." or any added substance which "*reduces* or *lowers* or *injuriously affects* its *quality* or *strength*." [Italics ours.] Sulphur dioxide in quantities far below 3,500 mgms. per kilogram *may* render a fruit injurious to health; it *assuredly* lowers or injuriously affects its quality and conceals imperfection. How well Secretary Wilson's performance in 1907, setting aside the operations of the Food and Drugs Act with respect to California dried fruits, has been carried down to these times with full force and effect, by his successors.

even where the amount of sulphur dioxide is as high as three thousand five hundred parts per million [milligrams per kilo]. Commercially prepared fruit, according to our analyses, does not contain sulphur dioxide in amounts this high. In fact it very rarely approaches this content of sulphur dioxide." [The quoted part is from Mr. Campbell's letter.]

All this looks very strange. In a sober article written by an experienced scientific editor of the department in a leading medical journal, physicians are given to understand that they need have no fears as to their patients' being injured by sulphur dioxide in dried fruits (which are favorite foods indeed in invalid and hospital diets). The limit of the tolerated substance in dried fruits is falsely stated to be at one-tenth the actual official and working limit, which in its turn is admitted by the Administration not to be a legal or regulatory limit at all, but merely the limit of commercial sulphuring practice; and this pseudo-limit is a purely nominal and formal matter in any case, and well above the value of sulphur content at which the fruit is given an unpleasant sulphurous flavor, even allowing for the loss of sulphur dioxide which occurs during the cooking of the fruit.

The scientific editor also emphasized, as a complete justification for sulphuring, recent researches showing higher Vitamin C content of sulphured fruit as compared with fruits dried without benefit of bleach and preservative and failed to state that this vitamin, present in raw dried fruit as fed to the laboratory

animals, is lost in the cooked dried fruit which is fed to human consumers; and the cooking is necessary to assure proper sanitary quality and digestibility, as well as to eliminate a portion of the sulphur dioxide. And note these two sentences buried in eight pages of text in the California researchers' paper, and not referred to by the editor of scientific publications: "*The only abnormality observed in the animals fed the sulphured fruit was a slight chalkiness and brittleness of the incisors* [front cutting teeth]. These are now being examined chemically and microscopically." While it is hardly safe to assume that laboratory rats suffer as much on a diet of poisons as do human beings, we cannot see why the animal nutrition experts of California are so willing that human beings eating California dried fruits should suffer any degree whatever of "chalkiness and brittleness of the incisors" in order that the fruit sulphuring industry may suffer no loss of dividends. If their fellow scientists will put no restraint on careless reasoning from healthy rats to men and women, many far from healthy, we may hope that such consumer influence as can be brought to bear in university affairs will teach these researchers a reasonable respect for the rights of consumers in California—and elsewhere.

Any effort by outsiders to force an improvement in the enforcement situation has been fought by the Federal Food and Drug Administration either by

pressure or by worrying newspapers and magazines with a stream of abuse, to prevent publication of unfavorable or critical discussions of the work. The Department's editor, in a letter to one of the authors, shows the results of such pressure. He writes: " . . . A very powerful publishing organization was about to attack the Administration, but an editor knew me and came to Washington to confer with me last night. . . . Here again the policy adopted was to consult the Administration and get the facts before publishing, and I weep that you did not think of this but burst into print without investigating. Naturally such an attitude on the part of an organization so powerful drew willing coöperation and open files from the officials." (The files were not open to less powerful interests, representing consumers.)

The boldness of the Administration's methods is shown by two other exploits. From his home in Mt. Rainier, Md., the same "editor" wrote a long letter to the *Journal of Commerce*, a New York business newspaper which was dealing critically and accurately, in news items and editorials, with the Senate Committee's investigation of the Administration, already referred to:

Mt. Rainier, Md., June 18, 1930.

Editor of the Journal of Commerce.

Sir:—I found it really refreshing to read your editorial "A Poor Defense" in your issue of June 9 last. There is something approaching genius in the talent of an editorial writer who can produce an article so

brief yet so crammed with demonstrable error. In a day when a distressing trend toward accuracy mars the quondam reputation for prevarication so long held high by the American newspaper it is of interest to discover that a great journal like yours stands conservatively with classic tradition. I have no means of knowing how many errors you may have made in your statements about matters upon which I am uninformed, but since you were studiously incorrect about matters upon which I am informed I can reasonably assume you batted 1,000 in this instance. . . . It is curious that I, *an uninformed layman*, can easily discover so many errors in an editorial brief. What might be found by one who was expert in the matters under consideration I cannot for a moment imagine. . . .

T. Swann Harding.

(Italics ours)

A Government Department which has need for an editor so adept in the arts of fixing public opinion as to characterize himself in publication as "an uninformed layman" is, we gather, a Department with an exceptional amount of unscrupulous and fancy dealing to cover up, and an intolerable amount of misinformation to promulgate. Strange that Congress should tolerate such low ethical standards in a regulatory bureau!

This capacity to state as sober truth diametrically opposed things at different times and for different purposes is not peculiar to the editor of scientific publications. Mr. Campbell and his assistant, Dr.

Dunbar, perform, when occasion demands, the same sort of verbal athletics, as the following quotations will show. (Italics are used, to indicate the statements which should be compared and contrasted by the reader.)

The first is from a letter of Mr. W. G. Campbell, dated August 12, 1930, to the *New York World*, at that time a leading metropolitan newspaper:

"While these Notices of Judgment as authorized by law cannot be published until after the termination of the court action, the pendency of the suit, the nature of the complaint, and the outcome are available to the press at the time. Every seizure action and prosecution brought under the Federal Food and Drugs Act is a matter of public court record to which the press has access. The Department could not keep the matter secret or confidential if it so desired. *In fact the Department frequently calls the attention of the press to important court actions with the hope that wide publicity will result.*"

The second is from a letter of Dr. A. E. Taylor of the Food and Drug Administration to the editor of the *Nation:*

"On October 13, 1927, when Mr. Ambruster called at my office to secure information as to detained and released or rejected shipments of crude ergot offered for entry by other importers, *I told him that it was contrary to departmental policy to discuss such matters except with the individuals having a direct interest in specific shipments.*"

If it be supposed that Dr. Taylor's statement applies, for some peculiar reason, only to import shipments (although in general the importer gets much less favorable treatment at the Department's hands than the American manufacturer), we find a similar clear statement of policy in the following transcript of an interview between the same Ambruster and Dr. Paul Dunbar. We have used italics in what follows, to emphasize the clear conflict of the positions which the Department takes at various times, depending upon what end it is trying to serve at the moment.

DR. DUNBAR: I have deleted from that record the facts connected with two samples involving shipments by two separate firms of ergot preparations [not crude ergot imports] on which *prosecution has been recommended to the Department of Justice,* but on which *no trial has as yet occurred,* and which *pending a court decision as to whether a violation of the food and drugs act has occurred, it would be improper to give out to anyone.*

His discussion goes on to recite certain facts about the shipments, not including the names of the firms involved, and continues:

The most recent information we have on that case is that it has been continued because of the crowded condition of the court calendar.

MR. AMBRUSTER: Then the action has actually been filed?

DR. DUNBAR: It has.

MR. AMBRUSTER: It is a matter of court record already?

DR. DUNBAR: It is; but it is not at the stage where a notice of judgment can be prepared and it must be perfectly obvious to you that *the Department of Agriculture cannot brand a manufacturer as a violator of the act until after the court has determined that our charges are properly made.* Therefore we are not in a position to give *to you or to anyone else,* other than the court, the records in that case.

Observe how to the editor of the *New York World* Mr. Campbell explains blandly and convincingly that "every seizure action and prosecution brought under the Federal Food and Drugs Act is a matter of public court record to which the press has access. The Department could not keep the matter secret or confidential if it so desired." But to a person actually making demand for access to this information so freely offered to all who ask it, the Administration's assistant chief, with equal conviction, explains that its officials are *not* in a position to give *to anyone,* other than the court, the records in the case. Further, after a long experience in the legal regulation of food and drug prosecutions he is "not clear . . . as to whether the rules of the court permit general publication of information which has been filed."

This technique of taking opposite positions on the same question, according to the peculiar exigencies of the situation, is known among the tough fellows

of Tammany politics in New York as giving a citizen the "run-around."

We regret the space that it has been necessary to devote to the dubious practices of this Federal Department; but without the specific evidence that we have presented concerning the misrepresentation, evasion, and misconception of the legal function of officials charged with a high responsibility, it would be difficult to understand how the wholesale poisoning of the public can go on practically without restraint, and why a complete new deal is emphatically called for.

XII

TO MAKE THE BEST OF A BAD LAW

A TREMENDOUS BURDEN of disease and suffering, the loss of thousands upon thousands of lives each year, and economic losses running to billions of dollars—this is the toll being paid today by 125,000,000 Americans for the ignorance, the indifference, and the avarice of the manufacturers of food and drugs, and for the laxity of Governmental officials.

In the year 1932, a quarter-century after the passage of the national Food and Drugs Act, dangerous foods and drugs are being produced by the most reputable of our manufacturers; a hundred different poisons are being fed and dosed to millions of men, women and children daily; worthless medicines and drugs are being sold everywhere, through drug-stores, department stores, and the mails, for the treatment of serious diseases; hundreds of thousands of persons are being persuaded to risk their health and, in many cases, their lives by trusting antiseptics that make pretty streaks of color but won't kill germs; poisonous hair-dyes, depilatories, and other cosmetic preparations flood the drug stores and the beauty shops; the most respectable of American drug manufacturers are selling dangerously impure ether

and other vital drugs for use in hospitals. . . . So runs the list. The purpose of this book has been to bring to light some of these dangerous practices.

Business men say that the public likes to be fooled. Perhaps so. But judging from the frantic scramble for vitamins to preserve health and for medicines to restore it, we confess our doubts that the public likes to be *poisoned;* or that 125,000,000 Americans want to act as laboratory guinea pigs for a small group of manufacturers each of whom insists that his particular poison, be it arsenic or carbolic acid, is safe and not *really* a poison, and who will try it out on the public—with full sanction of laws, courts, and regulatory agencies, city, State, and national.

As we look back over the material which has been so far presented in this book, we can see that many readers will find difficulty in understanding why this particular law, which was supposed to usher in a new era of protection of the public health, should be enforced with such singular indifference and niggardliness in comparison, for example, with the energy and the great sums of money that go into Prohibition enforcement or into the tracking down of counterfeiters; it is hard, we submit, to understand why an admittedly very incomplete inspection of meat and meat products is provided by the Federal Government at a cost of three cents per person per annum, while the corresponding total of inspection of all food supplies *other* than meat runs to but one cent per person per annum. The three cents per person covers

meat worth, say, 2 billions a year; the one cent per person must be spread thin enough to cover 20 billions of all other foods, plus drugs and medicines! A net ratio of 30 to 1, in favor of meat inspection, as to dollars spent per dollar of product controlled. Again, it is difficult to understand why offenses against an Act whose violation may involve the most serious perils to hundreds, nay thousands, of people, should be punished by fine, averaging around $6, for all the cases brought* including the seizures of goods (where it is the product that is "punished", as it were, instead of its makers); and why an Act which provides a maximum penalty of $200 for shipping adulterated drugs to hospitals for profit should have gone these 26 years unchanged in its general provisions and purposes, in the face of what the Federal administration admits is an increasingly unmanageable amount of adulteration and misbranding.

A recent Albany dispatch reports a sentence of ten years in prison for the offense of stealing spinach and beans worth $10; in another case an eighteen-year-old youth was given a five-year sentence for passing a twenty-dollar counterfeit note. Producing counterfeit ergot and ether, involving the life or death of perhaps a hundred thousand, has on the whole not seemed to the courts or to the law-enforcing agencies of the Federal Government to warrant any penalty

* This is based on the fines now collected, divided by the number of successful prosecutions, including those in which no firm or individual was fined.

beyond confiscating perhaps a portion of the essentially worthless goods involved in the offense.

It is difficult to examine these contrasts without wondering to what purpose and to whose advantage the leniency remains both in the statute and in its enforcement. We are almost convinced that with the rising power of the consumer and the extent to which legislators are listening to his demands, along with those two other classes of "forgotten men", the farmer and the wage worker (who together constitute the major consuming groups in America), Congress and the State legislatures may in the near future begin to provide some real protections and safeguards for consumers, not only in respect to cheats upon their health and physical welfare, but also in respect to their economic rights as compared, for example, with the consideration paid to the owners of a vinegar works or a flour mill.

The whole appropriation of the Department of Agriculture is about 300 million dollars; of this great sum, food and drug control work receives about one million dollars, or 1-3 of 1 percent of the departmental funds. This million dollars is also about 1-3 of 1 percent of the retail value of the output of patent and proprietary medicines alone in America. A little more than the Department now receives for all food and drug control activities would just about suffice, if permitted, to control reasonably well patent medicines alone out of a total of *interstate traffic* in

food and drug products running to about sixty times the sum represented by patent medicines.

The present staff and funds of the Food and Drug Administration are about equal in numbers, if not in quality, to what would be required properly to police just the Philadelphia area, though it must be admitted that the Department's present research facilities would be far from adequate to cope with the unsolved toxicological and other technical problems connected with food control in Philadelphia or any other small district. (We have reason to believe that on such problems the present Administration's men do not even read, much less perform and publish original work.) The Philadelphia metropolitan area produces, in 1,332 food-preparing establishments, about 381 million dollars' worth of food products, sufficient to feed about two per cent of the American population. The value of bakery products alone, proper control of which would require for the first year or two more than the whole present staff of the Food and Drug Administration, runs to 72 million dollars; confectionery, chocolate, and flavoring syrups together are valued at nearly half as much. From such a view of a local situation, it is clear that if we were to put to work immediately all of the unemployed chemists and men of comparable and usable skill and training in the United States, we would fall somewhat short of being able to cope with the problem nationally, until the unsolved problems were in part caught up with.

The Federal plant quarantine administration has 81 inspectors engaged in the enforcement of Federal plant quarantines *on the Mexican border alone*. The Bureau of Agricultural Economics has 100 estimators, statisticians, and economists in its one division of crop and livestock estimates. Each of these enterprises has more inspectors with whom to carry out relatively unimportant Governmental functions than the Food and Drug Administration has for the health and economic welfare of every individual in a population of 125,000,000. Indeed, the health of *animals* is being protected as to a single disease to the extent of 77 inspectors in the Department of Agriculture's division of hog cholera control alone, as against 65 inspectors in the same department's food and drug control!

In Germany a new law is under consideration which will require that every person proposing to enter into the manufacture of a medicine must prove that he has scientific knowledge sufficient to carry on such an enterprise properly. Yet Germany has but 5,000 or 6,000 so-called medical specialties to deal with, as contrasted with 100,000 in America. The new German law would require the active ingredients of a patent medicine to be plainly declared on the label—already a requirement in such "consumer-minded" countries as Chile, Ecuador, Argentina, Sweden, Belgium and the Philippines. Uruguay,

Finland, Mexico, and a number of other countries have regulations even more severely restrictive of medicines, cosmetics, and other products (some even rigidly control their selling prices). Germany, a much smaller and less populous country than the United States, finds it necessary to operate not 17, but 137 laboratories with facilities for the chemical, physical, and microscopical examination of food and drug products, in addition to elaborate provisions for meat inspection service.

In the space which remains, we shall indicate, in a necessarily compact and incomplete fashion, the steps which may be taken, assuming a developing public interest in the question, to subject the Federal officers and State and city administrations, where any exist, to the pressure necessary to bring about the revolutionary change plainly required in our methods of control of businesses vitally affecting health, and so, peculiarly charged with public interest. We shall indicate, in order, first those changes which could be carried out without radical modification of the present system and could thus be applied in the framework of existing custom and law and, later, a few which we recommend as the minimum necessary if the public desires anything approximating thoroughgoing and effective control.

In what follows, we have consciously disregarded questions of conflict or imperfect jurisdiction, as between city, State, and Federal governments. These are technical problems for lawyers, and the difficul-

ties that cannot be met will have to be gotten around, just as—to turn the problem upside down—the Bell Telephone companies have gotten around the perfectly legal and characteristically American State control of telephone rates by getting the cases, on technicalities, out of the State jurisdiction and into the Federal courts, where clever lawyers can thumb their noses at the fully proper and constitutional control exercised by State utilities commissioners. In most of the States where commissions exist, the commissioners have by such tactics been left with almost nothing to do but draw their pay. No system of control can be made to work unless the public, too, can hire well-paid and skilful attorneys to find what the People's representatives *can* do under legal forms and constitutions, just as busily as telephone and electric lighting company lawyers find what public authorities cannot do under our regulatory laws.

First we shall outline the alterations that can be made in enforcement, so as to obtain benefits in the health and economic protection of ultimate consumers, without significant changes in the Federal law and in its general mode of dealing with the problem, but merely through the demands of an enlightened public opinion, through Congress and the legislatures, upon enforcement officials, who now take the color of their policies entirely from the food and drug manufacturers and dealers. In these first proposals we shall refer solely to what could be done by honest, intelligent, and forthright dealing intended

to develop the possibilities of the Food and Drugs Act and its existing amendments to the highest degree possible.

The second group of proposals, admittedly incomplete and preliminary in nature, will deal with an intelligently designed plan, adapted to modern conditions, worked out, we propose, by a joint commission of legal and technical experts responsible perhaps to the Senate. The commission would design the strongest code of law and regulation that can be framed to deal with the manifest deficiencies and dangers set forth in this book, and hundreds of others too numerous for us even to indicate in this place.

A lawyer of skill to whom we have propounded some questions regarding the limping operations, in most fields almost paralyzed, of the food and drug authorities, remarked, after looking over the cases and penalties assessed, "The overhead costs of the pure food and drugs racketeers seem rather low, and the price at which they purchase immunity from jail sentences is very cheap indeed."

The penalties provided by the law, and the penalties assessed as the law is actually enforced, should be brought more nearly into accord with those which the State assesses on persons guilty of less dangerous crimes. The Food and Drugs Act's penalties must be brought into line with those under the statutes covering assault, theft, bribery, arson, and criminal

negligence, and other enactments providing general protection for the public safety. At the present time, as to fines levied, it is one-third or one-fourth as hazardous to violate the Food and Drugs Act by adulterating or misbranding human food as it is to commit exactly the same offense with respect to barrels of the rosin used as a raw material by varnish manufacturers, or with respect to *cattle or poultry feed*. We see, in other such cases we have examined, the same extra emphasis given to protection of a business interest of a producer as compared with the consumer interest of the *ultimate* purchaser of a product. Indeed, the Federal Government spends one-fifth as much in the enforcement of an act protecting farmers against false labeling of insecticides, as it does in protecting the much more numerous consuming population as a whole against poisoning, adulteration, *and* false labeling of the food supply.

It is most important to provide that the penalties be assessed as the original law provided, regardless of whether or not intent or wilfulness is a factor in the offense, and to provide further by amendment, as does the Canadian statute, that a *double* penalty shall be assessed for a wilful adulteration under the law.

There should be no further continuance of the current practice of failing to enter cases, or of the quashing of cases already entered for definite offenses against the food and drug laws. Public opinion must demand that offenders shall no longer be

let off with a warning on promise to be good in the future, *except in unimportant cases, and except when such warning and stipulation* are accompanied by full publicity for all the circumstances in the case, including the defendant's previous offenses, and a statement in detail of the reasons why legal penalties were not assessed.

The delay both in bringing prosecutions and in the publication of all such actions should be stopped at once. There should be no more Notices of Judgment issued two, three, and four years after legal action has been taken; we propose that immediate public notice shall be given at all stages of proceedings.

The administration should not only send out news stories giving pitiless and unremitting publicity to offenses against the law, from the moment of indictment or findings of fact by the chemist (not, as now, some time after a series of solicitors get through thinking about reasons why the cases should not be brought to trial), but also for all tests made on all products, as fast as ready and without regard to whether the cases will be tried in court. Such publicity should be operated on a decentralized basis and should be issued from the local laboratories, in order that the element of local interest may not be lost by the too careful and too cautious editing of a national Administration. The findings of fact should be issued without the slightest regard to whether the Administration expects to or will thereafter proceed to punish an offender. The facts of the offense are incompar-

ably more important to consumers than are the dicta of the courts and the punishment meted out.

Not only should the limitations and weaknesses of the work be emphasized, rather than its vague perfections, as at present, but these defects and difficulties should be put on as quantitative a basis as possible. On each given kind of food or drug, the percentage of the product actually subject to inspection, sampling, and control should be reported continually: How many samples, from how many lots or shipments, in what States and Territories, from what makers, what tests were performed, which products of what makes were above and which below the legal standards, and how much above and below.

There should be an immediate cessation of the present noncommittal and weasel-worded annual and other reports, including such statements as the following, which are typical of the Administration's public outgivings, "The quality of frozen and dried eggs extensively used in hotels and bakeries was investigated." What were the results of the investigation? What hotels and bakeries used which qualities, supplied by whom?

It has been said by a Federal officer in charge that it is "impossible for the Administration adequately to cover even the more flagrant forms of adulteration which are revealed by Federal investigations of trade and consumer complaints, or by outbreaks of food poisoning." To this unfortunate truth, so long as it remains the truth, continuous and unremitting pub-

licity should be given, in order, first, that consumers may be put upon notice as to the need for exercising such special protections and avoidances as are possible to them, until improvement in this situation takes place; second, that by such notice the duty may be unequivocally put before State and local groups, of stepping into the breach left by Federal failures and omissions; and third, so that Congress may by the continued reiteration of the dangers of the situation, ultimately be convinced of the pressing necessity of allotting the larger funds necessary for effective enforcement of the law.

The Administration should be kept constantly under pressure from Congress and State and city officials, and from the public, to cover the entire food and drug supply, but since to cover the whole volume of production would be impossible perhaps for years after the new plan of enforcement goes into operation, the publicity of the Administration should constantly emphasize the difficulties and defects of the coverage, so that the public would ever be on notice. A special advantage of such publicity (which is exactly upside down compared with that now issued in great volume by the Administration) is that it will give those manufacturers whose products are *not* being controlled a strong motive for pressing for an extension of control into their field. Obviously, if consumers learn that dried apricots are not at a given time being subjected to supervision (as they are not now), they will tend to transfer their custom to

sellers of prunes, or whatever else may be competitive with apricots for a place on the pantry shelf—and in the consumer's stomach. The apricot packers would soon take steps to insure that, so far as and as soon as may be, the supervision should be extended to their product too, so that they might again be enabled to compete. Not only would they be forced to urge such extension of the supervisory work; they would be forced to help procure the necessary funds from Congress—the exact opposite of the present policy of manufacturers and others subject to food and drug control, who for obvious reasons prefer to see the service as nearly as possible starved by the legislature.

An additional safeguard will be publication by the Administration of the list of newspapers and magazines to which the news stories of the Department are regularly sent, so that the public may judge for themselves whether news of vital importance to the public health is left out of their favorite newspaper or news magazine. The policy of the Department of Agriculture has been in many matters to refuse publicity even after adjudication, and even in matters where publication of findings has been required by congressional act. This, it is fair to say, has not been confined to food and drugs but represents a fairly consistent policy throughout the Federal service.

With all important offenses, the question of publicity should be provided for by a system similar to

that applied by Germany to violation of the law against unfair competition: a requirement that the offending firm should at its own expense publish as paid advertising in stated newspapers all the essential circumstances of its offense, the court's decision, and the penalties imposed. This penalty was recently assessed by the German courts against the makers of *Palmolive* soap as punishment for a line of misleading advertising.

There should no longer be release of seized goods for "reconditioning" or relabeling to bring them into compliance with the law, unless and until the legal administration shall provide sufficient supervision from funds and personnel outside those assigned to food and drug control to see that the reconditioning and the relabeling are carried out in exact accordance with the law's requirements.

The basic drug standards which the Food and Drugs Act now seeks to enforce, called the United States Pharmacopœia and the National Formulary, are in effect developed by semi-commercial organizations. In accepting these documents as a basis of the Federal law, Congress has approved as a standards-making body for the whole people, mixed professional and trade interest groups. The secretary of one of these by his own statement does not promulgate nor even know the commercial connections and corporate commitments of those members who sit in committees —as representatives, in fact, of *trade* interests of many and varied kinds. A new set-up for the develop-

ment of drug standards, in which business influence would be eliminated, is imperative.

There should be publicity of the fullest and frankest kind for all the Government officials' conferences and correspondence of whatever nature with legal and business and technical representatives of industry. We should like to see in practice the "glass pockets" (in Mr. Hoover's phrase), with all business affected with public interest done in the open. Any reporter or any person should be permitted to examine at will, and without explanation of reasons, the minutes of any conference and (under proper supervision in order to prevent loss of papers, etc.) the correspondence files or the report of any field agent or local officer to his superior, just as the much less important and local public records of land transfers, mortgages, etc. are open to inspection by anyone.

The Federal food and drug workers must again carry out research as they once did, back in Dr. Wiley's day, and again freely publish results as they have never done since Wiley's day. The publication should be prompt and absolutely free from control other than that required as to technical competence, no matter who is hit or what industries are exposed, either as to the nature or extent of business interests affected, or the degree of harm done to consumers.

A considerable staff should be devoted to the study and publication of digests of research done in related fields of science and technics, and in other countries,

to correct the ignorance at present characterizing the Federal administration as to important work done here and abroad (such, for example, as the recent French prohibition of yeast foods and flour "improvers"), and to avoid wasteful duplication of studies. Publicity for what is learned by such studies and exchanges must be a requirement in order that Americans may judge for themselves the degree to which American law and technics keep apace with the common interests of mankind in food and medicines.

XIII

WHEN THE CONSUMER WAKES UP

To make a thorough job of food and drug control, the present law and nearly all of the regulations under it, should be repealed and rescinded. It is plain that the restatement of the law and the recasting of the regulations should be done by a group entirely different from any of those responsible for the present situation. The start should be made with the organization of a special planning and drafting commission consisting of technologists and legal experts, representing the point of view and interests of the consumer and of science—and no other interest whatever. Such a body should have power to require testimony of the present enforcement and law officers, State, city, and Federal. It would, after a period of discussion and exchange of opinion, seek to frame a law which, while avoiding constitutional difficulties, would come as near as possible to providing protection nationally with respect to shipments in interstate commerce, and a further complete system of model laws suitable for adoption by State and inferior jurisdictions. For the defects in the present laws and some of the legal defects in its administration, those interested in the legal and historical aspects of food

and drug control will wish to review the close examination of the subject by Dr. M. S. Fisher, appearing in the *Columbia Law Review* of April, 1932.

A major fault with the present food and drugs act enforcement, local and national, is the inability of the Government to reach down to the corporate officer immediately responsible by act or policy or neglect for an offense. It is on account of this weakness that the Administration asserts it must follow its present practice of proceeding usually against the goods, rather than against an offender. There is only one way in which this difficulty can be corrected, and that is to set up a licensing system, by which some person or persons somewhere shall be held, criminally and civilly, individually responsible for an offense and its consequences to consumers.

Each firm licensed under this new public health Act would be required to post a bond representing, say, 5 per cent of its total annual business, this bond to be drawn upon for the expenses involved, such as preparation of evidence, and assignment of extra inspectors for closer supervision, in case of an offense by the manufacturer. At the moment when such an offense is first discovered and reported to the administration, a special inspector should be posted in the plant, at the manufacturer's expense and under his bond, to have full charge of the manufacturing and control problems set up by the development of the hazard or potential loss to consumers. This inspector would be empowered to stop manufacturing opera-

tions until the matter is completely cleared up, whenever such stoppage is necessary in the public interest.

The inspectors placed in the individual factories should be continuously rotated in order to avoid their getting into the excessively friendly relations which now characterize the contacts between Food and Drug Administration employees and the firms whom they are presumed to regulate. Some undercover work will, we fear, be necessary so that an inspector will never know when a proposal, coming from an officer or employee of the plant, that he should relax his vigilance or temper a decision may be a test of his corruptibility rather than an earnest attempt to deflect him from his duty. We see no reason why the elaborate and often successful disguises adopted by Prohibition agents, and their cavortings as men about town or as stevedores, as circumstances seem to demand, need be limited solely to that romantic branch of the Federal regulatory service.

The licensing provision would provide for the bonding not only of the corporation as such, but of each of its officers and managers of operations, as persons charged with a public responsibility far greater than that affecting the average bonded financial or other official in the public service. The corporate bond itself should be sufficiently high to assure real public protection.

The licensing system should have two branches, one controlling the product and one the manufacturer. There would be a general license for the manu-

facturer under the plan just outlined; in addition, every single drug specialty, food product, etc., should be registered, and covered by its own specific license document, subject to revocation, and forfeit of fees, in the event of any significant offense against a Federal, State, or local food and drug act, in respect to the particular product licensed; for failure to maintain proper working conditions, chemical and bacteriologic controls, etc. At the present time, the Food and Drug Administration operates a system of certifying food colors, exactly equivalent to what we propose. For example, a manufacturer making candy or cake which is to be artificially colored, finds it wise to avoid using any color or dye which has not been duly certified under an elaborate control system of the Food and Drug Administration, which goes so far as to manufacture, in Government laboratories, a supposedly needed food dye, in advance of its commercial production, to the end of encouraging some business firm to enter upon its manufacture under the Administration's regulations. If a food or candy manufacturer does use a certified color, he may be sure he will not get into trouble on that head with the Food and Drug Administration. Thus taking no chances, he sticks to the certified schedule of colors, set up for him on a theory of administration and close control which the officials have not been intelligent or daring enough to provide for other equally important and critical substances entering into trade.

Any dealer or individual shipping into interstate

trade or selling locally an unlicensed and unregistered brand or make of food, medicine, beauty preparation, cosmetic, dentifrice, therapeutic device, or obesity cure would, under our proposed plan, be guilty of an offense as serious as robbing the mails or peddling narcotics.

No factory, shop, or restaurant should be permitted to continue operation after entering of charges on its third proven offense against the food and drugs law, national, State, or municipal, or any one of such acts; no such factory should be allowed to operate again except after the filing of a doubled or trebled bond and reorganization under new management. Upon the individuals composing the new management and responsible for technical operations, should be put the burden of thoroughly qualifying themselves as competent technically and by proven skill in factory management, to operate a food- or medicine-producing enterprise, as the case may be. A manager who is an habitual absentee, or who does not understand the organization of processes and of control and test work, can never make trustworthy ether or sound and savory hams. The priceless ingredients of the product are integrity and endless care, and technical and managerial competence—not advertising slogans nor a famous name nor a long period of uninterrupted dividends.

We should subject to a padlocking provision similar to that of the Prohibition Act every food producing and distributing establishment that does

not rate close to perfection in its sanitary equipment and maintenance. The constitutionality of such an arrangement is evident from the fact that plants subject to the Federal meat inspection act, under which there are now Government-controlled establishments in 250 cities, are held (rather leniently, to be sure) to some such requirement. Let us further padlock every butcher shop or restaurant that sells food into which it has introduced preservatives or adulterants or that has defaulted in proper refrigeration or protection from insects, vermin, or filth. State inspectors find, and common experience confirms it, that some persons will never competently perform their duties as handlers and processers of food until they are required to obey regulations to the letter or to go out of business.

Let us provide heavy mandatory penalties, not reducible in the discretion of a court, for every case representing a considerable potential economic loss to the community or any real health hazard. Make "multiple seizures"—seizures of the adulterated, misrepresented, or misbranded merchandise, wherever and as often as they are found in storage or in shipment—mandatory for any product whatsoever not complying with the Federal, State, and municipal food and drugs laws. Seizures of goods should not be, as they are now, employed as a *substitute* for prosecution of the offending firm and individuals, but should be carried out in addition to the prosecution and as the original Food and Drugs Act intended,

to get the goods off the market and away from any possibility of further harm to the consumer.

Congress should set up obvious safeguards by which the Federal agents will have at least a chance of successfully prosecuting persons not *caught in the act* of pouring an adulterant into the food. The Canadian law provides a heavy penalty, including imprisonment, for having present on the premises of a food-manufacturing or food-handling establishment materials of a nature lending themselves to adulteration.

Misbranding and adulteration of food and drug products, as well as their shipment in commerce, should be made clearly into an offense against the State and municipal law, and, so far as constitutional, against the Federal law. The act of shipment involves too many complexities to permit proper control of offenses by waiting for an inspector to intercept the goods in interstate commerce, if and when he comes across them. To depend upon such interception of adulterated, poisonous, or misbranded goods already made and moving into commerce is as absurd as having to wait for an embezzler to cross a State line before proceeding to arrest him.

At present it is possible for a product to be legally shipped in bulk in interstate commerce under a correctly descriptive label, and thereafter to be broken down into small packages and relabeled in a manner absolutely violating the intent of the law. For example, much of the poisonous Jamaica ginger which

we have described was shipped in barrels labeled "liquid medicine", which a shrewd enough lawyer might have made it out legally to be, when courts accept definitions of medicines based on reference to an out-of-date dictionary. The offense that finally took place, of selling the poisonous ginger jake in small bottles, was beyond the reach of the Federal Government, and so, in practice—the State and city controls being as they are—outside of any control whatever. Yet, obviously, the major offense, and the only one involving certain knowledge of the adulteration, took place while the product was under what Congress intended should be the interstate commerce control of the Federal Food and Drugs Act.

At the present time the Administration has no right of entry into plants manufacturing foods and drugs, nor any right to supervise or to stop processes, even if an inspector should see rat poison being added to canned soup before his very eyes. Under the present law, the only mode of procedure against such soup, or anything else known to be contaminated, is for the inspector who has observed the occurrence by accident (having indeed no right to be present in the factory except with its owner's consent) to catch, if he can, such cases of the soup as he can find being shipped across a State line, or being delivered in another State after such shipment. The power of the inspector and officials should include the right of entry into any food or drug plant at any time, and the power to stop the process at any point and for

any cause which may reasonably be thought to introduce a significant hazard to or deception of consumers. Certainly, proper protection will require an exact and coördinated plan of control, too detailed to consider in this place, with resident inspectors shifted from plant to plant at regular intervals to avoid collusion and abuse of friendly relations.

It will be a most important step to transfer the work of the Food and Drug Administration to a new Department of Public Health and Health Education. The present bureau of public health within the Treasury Department will not serve the purpose, since there, too, enforcement would be subject to a divided system of interests—production and financial interests dominating—as they do now in the Department of Agriculture. In setting up the new department, it is most essential to provide that the supervision shall be from the point of view not of lawyers, but of toxicologists, bio-chemists, bacteriologists, and medical men and women of highest competence, integrity, and independence.

The control bureaus, of which there would be several, specialized to different fields—essential drugs and medicines, proprietaries, cosmetics, elementary food products, preserved foods, and so on—should be staffed with men of the type of Wiley and some of his earlier colleagues, imbued with the idea that in case of doubt the consumer's rights come first.

Legal counsel of highest skill and energy would be provided, that there might be prompt and skilful

preparation and handling of cases, and immediate appeal of every important case lost in the courts. Further, such a staff of skilled counsel, now unknown for the most part in Federal executive departments, would, in case of further failure in the courts, follow promptly with an appeal to Congress for legislation tightly drafted and positive enough to prevent nullification again by the courts of the intent of Congress to protect consumers. In general, the new administration would be staffed with men disposed to take as prompt and effective steps in a food and drug and health emergency as the Department of Agriculture now does on the Mexican bean beetle, the corn-borer, a grasshopper plague, or an epidemic of hog cholera.

There should probably be set up a system of lower Federal and State courts or commissions to handle food and drug cases, such courts to be so constituted and staffed as to have some background of the scientific principles involved: such, for example, as the reality of the risk which is run by consumers who are exposed not to one poisoning and adulteration hazard but to many simultaneously. Such a court could master the reasoning which makes competent authorities afraid to trust even the smallest amounts of avoidable adulterants and preservatives when the human organism is subjected to them for a long period of years, often during a period of impaired strength or vitality; a system of courts, indeed, which can learn in time that the public pays for lack of control, many times over any amount it is likely to

expend in penalizing either directly or indirectly those who subject it to hazards either of health or of pocketbook.

The power to prepare information leading to prosecution should again be put into the hands of technicians, as it was placed when the Food and Drugs Act was passed; and the legal work of preparing cases and presenting them in court should be separated from the supervision now provided by the Department of Justice. The division of the responsibility between the Department of Agriculture and the Department of Justice has resulted in a situation where neither agency can be definitely held to account for failures to prosecute, or for failures to appeal cases of vital public importance lost in the lower courts.

The provisions of the law should, of course, cover cosmetics of every kind, and obesity cures such as *Marmola*. At the present time only those very rare cosmetics and other preparations, which *on their labels* claim prevention, mitigation, or cure of a disease are subject to even the weakest control. The law should cover not only surgical dressings and gauze, bandages, compresses, sanitary napkins, etc., trusses, and medicated and Castile soap, but also every other article and every other service—such as barber shops, beauty parlors, and commercial laundries—which has a direct or indirect relation to health or presents possibilities of the poisoning or the bacterial infection of its users.

Any product that may injure the health or, like a lead-glazed cooking utensil or a cadmium-plated milk can, may have an effect upon food or medicine and so indirectly injure health, would automatically come under the provisions of the new law. Paint, ethyl gasoline, and ultra-violet lamps are examples of common articles now entirely uncontrolled which, under the proposed plan, would be subject to official restraint and protection in manufacture, advertising and sales promotion. In Holland, where a similar provision exists in the law, cooking utensils and even knives, forks, and spoons are included in the operation of the food and drug controls, as they should be. Why should any of our enamel cooking ware contain the poisonous metals such as zinc, arsenic, or antimony, that have already injured many persons in such use?

A most important provision to be written into the new legislation is one which will make every trade-marked name relate to but one substance, or mixture or compound of substances. Each trade-marked food or drug product or related product or device covered by the health control provisions of the new law in any way will be required to carry an identifying name and number and a full formula or statement of ingredients of the article. A fuller and more exact statement of the ingredients and methods of preparation upon which the label would be based, after official approval and acceptance of the product, would also be filed, under affidavit, with the food and drug con-

trol service at Washington, as well as in the food and drug control office of every State and of every city of over 25,000 population, for public inspection. By this single provision requiring the full formula on the label and in most cases (to be provided for by regulation) in the advertising also, we should eliminate all secret remedies, mystery cosmetics, and "costly ingredient" toothpastes.

The American Medical Association should sponsor a group of home remedies for all the conditions reasonably amenable to home treatment—transient coughs, mild attacks of indigestion or constipation, and so on—and this list should not be too conservative, because the average consumer cannot afford to obtain professional advice on every minor ailment, from athletes' foot to a cut finger. If he did, indeed, he would have the larger ailment of inadequate diet, unless his income is far above the national average of American consumers, or his doctor's fees far below the average physician's fee.

Provision should be made for an absolutely comprehensive and revealing system of labels and label declarations. Engaging in the production of a food or drug that ought not to be produced because it has no proper and scientifically established use as food and medicine, could be prevented at its origin under other provisions we propose, but assuming there were a proper use for radium water of the type of Bailey's *Radithor*, it should not be allowed to go into commerce at all without a clear statement of its hazard-

ous character and the conditions under which it might be safely consumed, and the antidote (in this case there was none!) not only on the label but in all advertising, including every piece of literature connected with the package and used in any other way to promote sales.

The claims as well as the formula, ingredients, and process of manufacture of food and drug products should be approved when the food or drug is registered, and such claims would be subject to change only by official approval, and only as new scientific information would appear to warrant. The use of the mails would be barred to any publication carrying advertisements with claims for food and drugs, including toothpastes, cosmetics, etc., other than those approved specifically in this way. Broadcasting stations, for the same offense, would be excluded from the right to continue operation, as they are now suspended for a purely commercial and technical encroachment on another station's time or wavelength. Every article of food or drug shipped in package form would be required to bear the name of the *actual manufacturer*, the exact place of manufacture, and the identification numbers of the factory and the individual product.

All drugs and foods subject to deterioration would be required to be plainly dated, and to show also the date beyond which their use in consumption or in compounding prescriptions, etc., would be illegal. The State, county, and city governments would, of course,

make mandatory periodic checks of drugs and prescriptions in pharmacies, and the pharmacist who uses an outdated (stale) drug, or who is found upon test to compound prescriptions carelessly or incorrectly, should lose his license, and regain it only with the same difficulty and inconvenience undergone by an automobile driver who has lost a license for negligence, driving while drunk, or other offenses.

The claims would be controlled by an administratively independent and separate subdivision of the general food and drug administration, having sole control of all advertising in all media whatsoever. Such control could be lawfully relinquished to the Government in return for the privileges granted under the license arrangement discussed in another part of this chapter. It would be a necessary qualification of the members of this advertising control board that none should ever have been in business enterprise or have been connected with the peculiar and anomalous type of "scientific" work required by business corporations of their consulting experts, or be in the slightest degree interested in the profits of any manufacturing or distributing concern whatever, or have the mental attitude which postulates the success of our civilization upon "creative salesmanship," or the subjection of the scientific spirit to the tenets of business enterprise.

The manufacture of foods, drugs, medicines, and all articles directly related to public health should be treated as a public utility, subject to regulation

as to formulæ, materials, processes, methods of control, and safe and manageable channels of distribution. No new concern would be permitted to enter the business without filing an acceptable certificate of necessity and technical and managerial ability, and no existing concern would be permitted to produce a product which it had not hitherto manufactured, without first obtaining a similar certificate, designed to guarantee the competence of the persons and organization concerned, not only in an absolute sense, but also relatively to the competence of other producers by whom the product might be made. We must have not pretty good ether, or moderately reliable ergot and digitalis, but the best the technical arts are capable of providing, for any patient for whom a physician may prescribe or use these vital substances charged with the power of death or irreparable injury.

In the case of an offense against the Act, or harm to the health or safety of consumers by the manufacturer of any product comprised within the application of the act, the burden should by law be placed upon the manufacturer to show that he has, before manufacturing and marketing the product, obtained competent evidence from stipulated, registered scientific agencies (other than commercial laboratories or testimonializing college professors) that the new product was safe and suited to its purpose. Such evidence should not in food and drug cases be established by the ordinary hired expert testimony (the

available amount and force of which is in nearly every case limited only by the ability of the parties to an action to spend large sums in employment of distinguished or allegedly distinguished scientists or physicians). The essence of this proposal is to provide that the manufacturer shall not merit and obtain his day in court unless he has first, in good faith and with unquestionable honesty and ability, accepted the burden which properly lies upon him, of having obtained assurance of the usefulness, effectiveness, rigor of manufacturing control, and therapeutic safety of his product *before* offering it to the public for use, and continually thereafter, so long as it is marketed. We propose to eliminate future physiological and bio-chemical experiments in which the population are made to act as guinea-pigs. There will be no intention or need to discourage the use of new and potentially valuable remedies and modes of treatment. But anyone familiar with the development of human knowledge knows that these significant inventions for the mitigation of disease and the greater health of the race are not going to come from manufacturers of such low scientific and social qualifications that they make a dangerous poison the principal ingredient of a toothpaste, or offer an arsenic salt as a depilatory, or wormy and moldy drugs for obstetrical cases.

We can give but a few words to the discussion of one of the most curious and dangerous defects of the present system of legislation: its failure, as enforced,

to require any sort of control over foodstuffs which are *remanufactured*, or of which packages are broken for bulk sale to consumers. The baker can dose his pies and cakes with colors, acids, and salts of every sort, can substitute cornstarch filler for part of the fruit, use dried eggs and egg substitutes for real eggs, and dried milk and skimmed milk products, and remain entirely exempt from control even of interstate shipment, because a pie, as the officials interpret it, is the name of an appearance or a general form and structure, rather than a result of combining particular kinds and qualities of materials, and no others, in a certain process of mixing, molding and baking. There is no consideration of the gross bacterial poisoning hazards of the cheap cornstarch fillers in pies, pastry, and cream puffs; no consideration that the baker's customer might not care for citric acid when he thinks he is buying lemon-flavored cakes or cookies.

Soda fountains serve drinks and sundæs made of syrups and fruits heavily dosed with preservatives, artificial color and flavor, and denaturants, to prevent spoilage and to improve color and texture; but not one of these "food preparations" could find a market if it were required that the labels on the cans and jugs and bottles must be displayed before the customers ranged along the counter. Of many fountain and bottled soft drinks and bakers' and restaurant products, every single ingredient is artificial or has been denatured or dried or canned or dosed

with an adulterant or preservative—some or all of these duly shown on the labels of the sacks, barrels, cans and bottles of materials. But not one of these warnings of poison, adulterants, bleach, or preservative comes through to the consumer of the product. Who, in his own home, would preserve cooked prunes or cherries or raspberries with drugs like benzoate of soda or sulphur dioxide instead of putting them in the refrigerator? That is what is done with such fruits in the form in which they are likely to reach one in soda fountain and restaurant dishes. Every soda fountain and candy shop and restaurant serving artificially colored and flavored, preserved and filled syrups, glucose-sweetened ice cream or shellacked candies, cakes, and pastries, should be required to post the whole list of its sins on behalf of art and artifice in a conspicuous place; the public will take care of its more obvious interests promptly enough when the shameful categories of adulteration are made public. In time the whole noxious mess of artificial and sophisticated and adulterated products must be made *illegal*, no matter whether declared or not; for the present we can do much by demanding that the facts be told to all who can read, wherever food and drink are sold or served.

In considering these adulterations and their probable safety, we must consider that the human stomach evolved in a world stocked with game, eggs, milk, fruits, berries, cereals and seeds, vegetables and a very limited supply of natural sweets like honey—

no sulphur dioxide, no sulphite of soda, no glucose, no alum, no aniline dyes, no benzoate of soda, no liquid "artificial smoke" for curing hams and bacon, no frozen meats or eggs, or bleached or denatured flour. The only race of beings that can successfully live and breed on adulterated and sophisticated products is one which has spent its period of evolution in a chemical plant and fed from among dye vats, crucibles, acid carboys, desiccators, stills, and sulphurizers. And we who now live on this planet are not that race.

There are a few places—where Chambers of Commerce do not dominate civic life—where restaurant keepers and other purveyors of foodstuffs, sweets, and other edibles, are required to post signs in their shops declaring the serving of oleomargarine instead of butter, or raw milk instead of pasteurized. It is evident that a hopelessly weak link exists in the chain of protection, if "remanufacture" and serving of food are not safeguarded by something equivalent in this difficult field to the system of declaratory labeling discussed elsewhere. If every baker of pies containing high-melting-point shortening, glucose as a sweetener, citric acid, and cornstarch, and substandard canned fruit, were required to state all those facts on a card or label attached to the pie, the baker would in a week find ample cause to reorganize his processes and formula, and very rightly so. Who but the starving would buy a pie labeled thus:

"CORNSTARCH-FILLED, GLUCOSE-SWEETENED PIE MADE WITH SUB-STANDARD CANNED PINEAPPLE, ARTIFICIAL (CITRIC ACID) LEMON FLAVOR AND ARTIFICIAL COAL TAR COLOR."

And under present conditions, this is a common, not an abnormal, baker's pie, and it goes as freely into interstate commerce everywhere as does imitation raspberry soda; though the latter in a few States and in interstate commerce must bear upon its label the brand of its shame.

Tinned and preserved and "durable" foods and drinks and other devitaminized food products have their place in the dietary, though in our opinion a very limited place; but there is no reason why any dining-car or restaurant should be permitted to serve any one of them without notice to its customers. We have a right to fresh fruits and vegetables and freshly prepared desserts, unless the manner of serving or of listing on the menu clearly puts us on notice as to their different character. The law should not tolerate menus listing tongue when canned tongue is meant, or "green" peas (suggesting fresh peas) when canned peas are served. Every food of less than the best and freshest customary grade should be noticed to the consumer in such way that its deviation from the highest (that is, most healthful) grade is clear to any consumer paying for food or food service.

One of the weakest elements in the present system has been the absence of standards. All foods and drugs are good or bad only as related to a reference or standard such as the Pharmocopœia. But the

Food and Drug Administration has never been empowered to provide legal standards; and thus, in taking cases to court, it has had to depend upon the common understanding of the very trade it was proceeding against and, to a lesser extent, of equally ignorant consumers. The Government has found this a very weak method of doing battle against the shrewd and resourceful counsel for the manufacturer.

At the beginning, standards drawn up by toxicologists, nutrition experts, and others, after open discussion and conferences with authorities abroad, *should be enacted into the law.* It is found that standards enacted by the legislature stand a chance in the courts and can be enforced, and the Food and Drug Administration has been exceptionally successful in obtaining convictions in prosecutions of cases involving butter, certain characteristics of which have been defined by act of Congress and of State legislatures.

At regular intervals, certainly not less often than once a year, the standards-making body would, after consultation, convene and reach its decisions. It would then report to Congress at each session, with well-drafted and well-briefed suggestions for *changes in the general provisions of the law* and for *new standards* to be enacted into law, including definitions, for example, for all sorts of common food and drug commodities and their grades, now completely undefined and subject to the hazards of court definition by the aid of a dictionary.

It is these definitions and specifications upon which, in the final analysis, the effective enforcement of the law depends, and it is partly due to the nearly complete lack of any such standards in tight and comprehensive form that the enforcement in the past twenty years has been so weak. There should be a standard specification or standard definition for every food, drug, cosmetic, and similar product that is sold. Products with permitted deviations from the standard should be permitted to be sold only if they plainly show the nature and amount of the deviation from standard on the label (just as deviations from the Pharmacopœia are now required to be shown on the label of drug products which are subject to that standard).

A new division of toxicology (research in poisons, intentional and otherwise) would be established in our public health administration, with independent laboratories and experts in different parts of the country. And this is most important: before tolerating any adulterant or preservative or any new method of food and drug preparation or other matter affecting the public health and involving potential hazard (ultra-violet irradiation of foods, or the use of a new anti-knock gasoline, for example) let there be required a vote of the experts resulting in unanimous approval; moreover, let the experts' vote be cast in secret so that no one may bring pressure to bear upon anyone to change his point of view in order that he may the sooner deserve promotion because he

falls in better with the "policies" of the régime. The new régime must have but one policy: The protection of the public health. To speak of "business losses," as the Administration has done in the past, is to talk absurdities. What business loss, Mr. Campbell, is equivalent in the Administration's arithmetic to the poisoning of hundreds of thousands of citizens, from babyhood to old age, with arsenic-spray residue?

This proposal for unanimous approval by the toxicologists is so reasonable, and so in accord in its general purpose with our theory of convicting criminals on a jury trial, that it is necessary for us to point out that it is the exact reversal of the customary practices, and the practices now followed in the Federal and other food and drug services. We propose, in a nutshell, a radically new viewpoint: that in every case of doubt, the manufacturer shall lose and the consumer shall win. The going procedure is that in case of doubt the Federal, State, and city authorities cheerfully and in the quietest manner imaginable tolerate the defection for an indefinite period; the consumer, who does not even know what is happening, suffers an irretrievable loss both in money and in health.

It is most important that city, State, and Federal laws be brought into uniformity on the many points on which such uniformity is advantageous, as, for example, the form of enactment, the underlying standards of quality under which decisions to prosecute would be reached, and the requirements for

qualifications and duties of inspectors. At the present time, the system is so loose and uncoördinated legally that elaborately collected and organized evidence forming proper basis for a prosecution under the State statute is likely to be nearly useless either for a city or for a Federal prosecution. And local officials, ignorant as they are, in the main, of both the legal and the technical questions involved in their enforcement problems, have an unreasoning dread of bringing cases to court, because they know how likely the defendant is to marshal well-paid technical and legal experts to his defense, and make the efforts of the public authorities appear disgracefully weak and unskilful. The scales are more heavily loaded, by far, against successful prosecutions by local enforcement officials than by the Federal, of whose deficiencies we have read enough in what precedes.

If the money cannot be found to provide the type of enforcement we have outlined, there is ample precedent for making the manufacturers pay the out-of-pocket costs of the Government, in the tests and supervision of the manufacturers' products. The spread in price between the prime cost of a drug and the wholesale and retail prices of the finished commodity is so great that the expenditure that would be involved in providing for proper control would be utterly trifling by comparison.

We estimate that a sales tax of 1-3 of 1 per cent on food and drug production in America, paid at the source, would be the maximum required to pro-

vide good and effective enforcement. State enforcement, incidentally, should be carried out by allotments from Federal funds, as the Federal Aid state highway operations are carried out at the present time, and these allotments would depend, as they do in the case of highways, upon the proper standards of quality of work, qualifications of inspectors, chemists, etc., being enforced by the State. Surely if Federal highway aid can be refused to a State because its politicians, conniving with contractors, propose to build a non-durable or uneconomical type of highway, the Federal allotment of funds for Food and Drugs Act enforcement warrants exactly the same sort of control of the quality of the enforcement which in turn is to control the quality of the foods and drugs reaching the consumers. We can say without the slightest hesitation, from a fairly long experience of our own, and from wide reading in administration of standards of quality and some related aspects of public regulation of certain operations of trade, that the 1-3 of 1 per cent maximum sales tax will be repaid in the form of large dividends to consumers, not merely in reduced costs and decreased extent and severity of illness and disability, but even on a purely pecuniary basis, in the economies that will become operative in a competitive commercial system beginning for the first time to offer only goods up to a definite minimum standard of quality. In such a system, effective price competition can become operative exactly as it operates now in the mar-

ket for certain raw materials or unfinished goods that must comply with definite standards and grades. In the purchase of Government-graded hay and grain, and rosin and turpentine, for example, the element of gambling is practically eliminated on the questions of quality and grade, and the price competition of the market is enabled to operate fairly effectively.

Many will say at once that the effect of adopting some of these proposals would be to drive many concerns out of business. No doubt they would. Americans are inclined to applaud and reward clever merchants whose business acumen succeeds in taking trade away from less clever competitors. In spite of the loud cries of rage and pain from small merchants, no action is taken to block the gradual displacement, by A & P and Woolworth and other chain stores, of small retailers in America. To force out of business a manufacturer or dealer whose negligence or incompetence endangers the public health is far less heartless than much that goes on in ordinary capitalist competition. The protection of the community *will take no essential rights away from those who propose to deal honestly and in good conscience with their public responsibilities.* Only dangerous violators of necessary safeguards will be barred from businesses affecting the public health; and they must be barred, for the same reason that a plumber or a wheelwright is not permitted to practice surgery or, without public control of any sort, to design and build a theater. Even in laissez-faire America, we have found that we sim-

ply cannot permit ignoramuses to build and operate steamships or to build railway bridges. To permit the uncontrolled manufacture and distribution of foods and drugs is a far more reckless disregard of the people's rights.

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YOUR RESPONSIBILITIES

FOR YOURSELF as a consumer, there are a few things you can do. First and foremost, let your voice be heard, not once, but often, by your city, county, State, and national legislators and your newspaper editors, if you think that some or all of the foregoing provisions and changes should be made.

Read the current Notices of Judgment of the Food and Drug Administration, and as many back numbers as you have time for. These Notices, which record violations acted on by the Courts, are sent free to all who ask to be put on the mailing list. Simply address "Department of Agriculture, Washington, D. C."

Get on the Insecticide Administration's list too, and see for yourself how much more hazardous it is to adulterate or mislabel an insecticide than it is to adulterate hospital ether or sell a bogus antiseptic.

If you think the matters shown in these Notices of Judgment are important, withhold your custom from all firms that sell the products proceeded against. That won't do much good, to be sure, because the present régime leaves immune from penalty most of the large offenders, who, by various means, avoid ap-

pearing in these Notices. You may also wish to withhold your custom from firms that oppose stricter food, drug, cosmetic and similar legislation, State, city or national; and from firms which are members of trade associations opposing such corrective measures. Read, so far as possible, all the hearings before committees of Congress on food and drug matters, in order that you may find who those people are, and how brutally or how shrewdly they put their business interests above the public's rights, and with how slight objection or reproof from members of Congress conducting the hearings.

Use your judgment as to possible means to protect yourself against hazards to health. Avoid, of course, *every* proprietary medicine, hair-dye, depilatory, and skin bleach of unknown composition, and most of the others too. Do not douse your scalp with a tonic that may, so far as you know, contain arsenic or cantharidin or salicylic acid. Do not use bleach creams and skin whiteners, with their hazard of mercury poisoning; or depilatory creams, possibly containing thallium or arsenic, unless you are willing to risk horrible results involving perhaps a lifetime of after-effects.

Avoid eating the skins of fruits which contain residues of insecticides until an authority you can trust tells you which are safe, and why. You may, if you are not in perfect health, wish to avoid dried fruits except prunes (which are not sulphured), and alum baking powder, and cooking fats which do not melt

at body temperature or ever grow rancid.

Demand the dismissal of any official who makes a ruling or a pronouncement showing a total lack of that sensitiveness to the public interest required in a regulatory official. Some teeth whiteners, though not so labeled, said a Government official recently, contain acids destructive to the enamel of your teeth; "the buyer may, however, through investigation, or through consulting his druggist, determine whether or not a dentifrice contains hydrochloric acid." The official knows, by test, which dentifrices are acid; if one of the taxpayers who pay the official salaries wishes to know, he can try to find out from his druggist. Can anyone suppose that we must go on paying salaries of officers who, having such vital facts at their disposal, invite us to let a drug clerk *guess* at the answer for us?

If you make your demands loudly and persistently enough, you will ultimately obtain food and drugs somewhat freer than now from defects. Even before the operation of a new law, much can be done by consumer-pressure. Unsulphured fruits, and apples and other fresh fruits *certified* to be free of arsenic down to .002 grains per pound (1/5 the present export tolerance) or below, and with no detectable lead —these at least will be obtainable, though doubtless at an unwarrantedly high price, as soon as enough consumers express themselves as determined to have them and no others.

Bother your congressmen and senators and State

legislators from time to time about the evident negligences of the Food and Drug Administration and about the weaknesses of the law; and about the trash and hokum you find at your druggist's, and the misleading labels on the stuff he sells. About such matters, our legislators do not trouble their legislative heads, and they will not so long as manufacturers and packers are content, and so long as consumers do not know the extent to which their Government leaves them undefended against frauds and poisons.

Write to your newspapers and magazines and ask why they take advertisements of inveterate violators of the Food and Drugs Act—like the great packing houses—and why these journals almost invariably fail to print the very interesting news stories about convicted violators that occasionally seep into the Notices of Judgment. Again we suggest, get these Notices and read them faithfully so that you will know not only what frauds within your knowledge and experience the Administration is missing, but what your paper, even more tolerantly, omits; and so that you can tell the editor when you see him what you think of his policy and its relations to the obligations of a free press.

Existing organizations of consumers can play a commanding part in bringing about reforms. The original Federal and State food and drug laws were continually forced upon the attention of legislatures by unremitting agitation of women's clubs and civic bodies of all sorts, which were as much re-

sponsible for the passage of the Act as was any other agency. In the present critical situation an informed and organized demand from such a group as the federated women's clubs could furnish all the public discussion and legislative pressure necessary. It remains to be seen, however, whether such bodies, which in recent years have taken on a closer and closer affiliation with the ideas and interests of business enterprise, can express themselves again in respect to a public question which is nearer to their actual and vital interests than to those of any other group. Independent women's organizations, at least, can inform themselves on these matters and bring upon legislators that group pressure which it is practically impossible for them to ignore or deny, when it comes from a group whose interest is that of the whole population—including that of the legislators themselves.

We who have prepared this book are technicians primarily, and we are unduly impatient, no doubt, with the way legal safeguards of "free enterprise" get in the way of all attempts at controlling corporate business in the public interest. We see the law pay little attention to the civil rights of the small business man and of the individual as consumer, at the same time that Federal, State, and city officials touch corporation matters with extreme delicacy, restraint, and secrecy. We have seen a deadly poisonous depilatory cream being treated by city and other officials in New York with the same hesitancy

and deference that might have been paid to a visiting cigarette magnate or a beer-runner with good police connections.

We never have quite understood why in these matters, the interest of a business corporation always has the preference over that of the non-commercial individual, and though we do not think it fair, our lawyer friends—we have asked a number of them about it—seem to understand it, even if they can't make it seem quite reasonable to laymen. Therefore, in what precedes it must be understood that the remedies proposed may involve what the lawyers will feel to be legal difficulties of a nearly or quite insurmountable sort.

We hope this is not the case. We have noticed that legal difficulties tend to melt away if the problem is one for which the public really wants and insists upon a solution. State compensation insurance and compulsory State-paid schooling were each, in their time, held to be unconstitutional and illegal encroachments on the rights of property. Public health services, too, were quite impossible a few years back, and are still lacking in many States and cities. We now have them, where they exist, because legislators discovered they were wanted by unsuspected numbers of people who had votes and could influence the votes of others.

City governments can and do exert themselves, when they wish, on such minor problems as free testing of bootleg whiskey in order that visiting Shriners may not succumb while enjoying the balmy air of the

city of the Golden Gate. In New York the city authorities have even intervened under the forms of law, at the newspaper publishers' instance, to prevent the selling of evening editions of the next morning's newspapers at a premium above the standard price. We have an idea that the city health authorities can find means to proceed against *Koremlu*, *Radithor*, *Othine*, and *Marmola* whenever they think that the public knows enough to make the officers uncomfortable when they do not so proceed.

If you are poisoned or injured by any food, drug, or cosmetic on account of the ignorance, carelessness, misrepresentation, or concealment of a manufacturer or dealer, or defect in his technical control, see your lawyer. It is the opinion of competent legal authority that in many cases of the kind cited in this book, the manufacturer or dealer is not only liable to the consumer for damages, but may also be criminally liable for his negligence or misrepresentation; in extreme cases even a prosecution for homicide may be in order.

We suggest that in general you set yourself the task of making it less and less comfortable for your State and local health and food officials. Give your congressmen and senators, and your State legislators no rest until they sit in judgment on the work of the national food and drug administration and the local health and food control authorities.

Above all, let your voice be heard loudly and often, in protest against the indifference, ignorance, and

avarice responsible for the uncontrolled adulteration and misrepresentation of foods, drugs, and cosmetics. In this adulteration and misrepresentation lurks a menace to your health that ought no longer be tolerated.

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